Soybean Digest

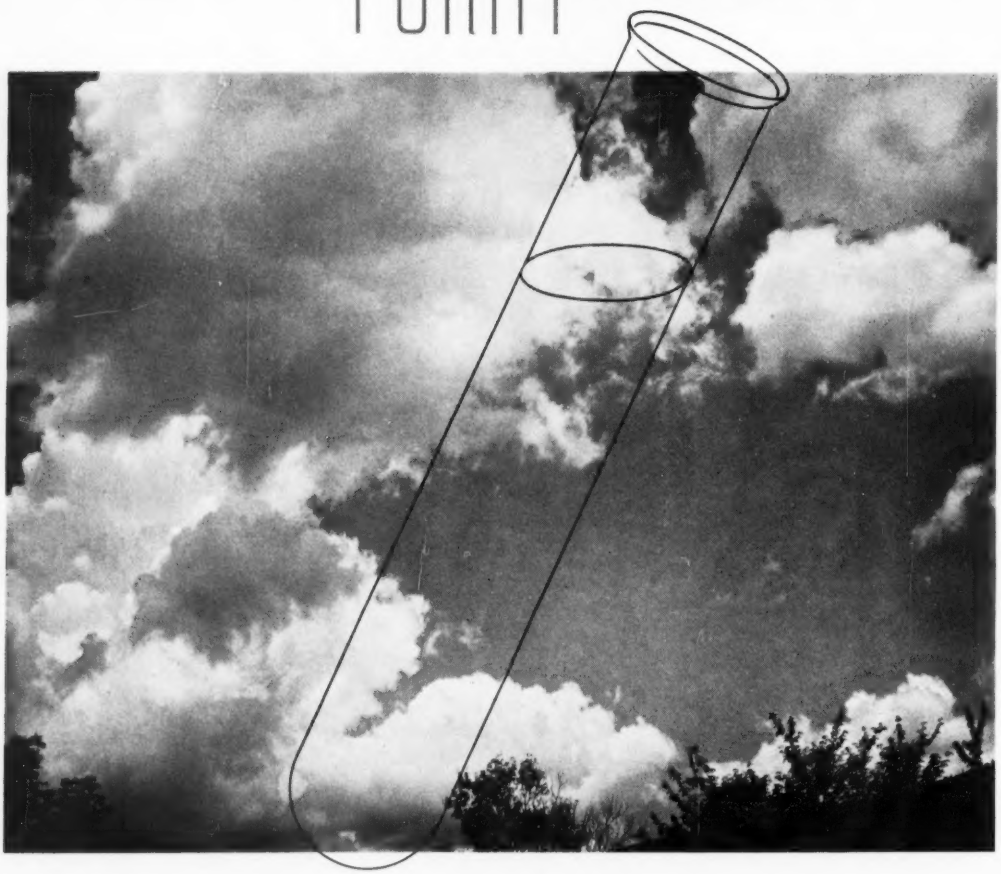
OFFICIAL PUBLICATION • AMERICAN SOYBEAN ASSOCIATION

Plywood's a modern market for soy. See page 11.

JULY ✦ 1953

VOLUME 13 ✦ NUMBER 9

IN A SOLVENT PURITY IS ESSENTIAL



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THE Soybean Digest

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HUDSON, IOWA

Vol. 13 • July 1953 • No. 9

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THE SOYBEAN DIGEST

EDITOR.....*Geo. M. Strayer*

MANAGING EDITOR.....*Kent Pellett*

BUSINESS MANAGER.....*Geo. McCulley*

DIRECTOR OF CIRCULATION..*Delmar C. Cobie*

OFFICES

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THE AMERICAN SOYBEAN ASSOCIATION

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Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the industry.

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EDITOR'S DESK

WHEN WILL OUR INDUSTRY WAKE UP? Production of fats and oils in the world is still inadequate. There are still many people who have insufficient supplies. Production of fats and oils in the United States has continued to increase. Before the war we were net importers—now we are exporters. Our export markets, which reached major proportions immediately after the war, have shrunk. Dollar exchange is not available, and we have stopped financing our own exports through governmental channels. There is still need for our fats and oils in world trade—but there does not yet exist the mechanisms through which trade can be completed.

The federal government owned most of the 1952 cottonseed crop. Some of it has now been sold. The federal government owns more than a full year's crop of flax, measured in terms of linseed oil now on hand or uncrushed. The federal government owns some butter. Where will the 1953 soybean crop go? Into governmental hands?

It is time for some serious thinking. In the adjustments which our agricultural economy must go through there are some things not pleasant to each of us as a producer. It is reasonable to expect that 1954-crop soybean support prices may be dropped to lower levels—or even discontinued. If either takes place what will happen to the soybean processing industry? To country handlers? And to the growers?

In the adjustments, will proper emphasis be given to the improved technology of usage of soybeans? Of the oil in food products? Of the meal in livestock feeding? Will we allow historical relationships to establish the future? Or will we recognize recent developments?

This is not the time for alarmist thinking. It is the time for sound, basic thinking and planning. Eventually it must be done on an industry-wide basis. Such will probably not come until more of our industry drops by the wayside—until more of the leadership starts planning for the future rather than bemoaning the past and present. We are operating in an economy which has achieved a certain measure of greatness because it is highly competitive. Contrasted with the cartel system of European countries, ours is a far more productive and prosperous economy for a far greater number of people. But we must recognize that the soybean industry must compete with other fats and oils and other proteins. Those industries are united—organized—striving toward a common goal.

Is it not time to think in such terms for the soybean industry?

WILL NEED STORAGE FOR 1953 CROP Cottonseed is a by-product of the production of cotton lint. In contrast, soybeans are produced for the beans. Thus, the recent announcement by Secretary Benson that he will support 1953 crop cottonseed at only 75 percent of parity rather than 90 percent as during the past year was not a major blow to the cotton industry. Only a small portion of the income of the cotton producer was affected.

Experience of the last year has shown that cottonseed at 90 percent of parity was too high-priced. It was priced out of the market. Uncle Sam found himself to be the sole buyer of large quantities of cottonseed as soon as it came from the ginners. He owns enough cottonseed oil, pressed or extracted from that cottonseed, to make *1 billion* pounds of margarine or shortening. That same taxpayer, through Uncle Sam, also owns some butter and other dairy products.

Soybeans from the 1953 crop will be supported at 90 percent of parity. The Commodity Credit Corp. has taken ownership of a considerable quantity of 1952-crop beans during recent weeks. Some are being offered to domestic processors, others are being exported.

What is going to happen when the 1953 crop starts to move? Who will buy the crop? At what price? There is good possibility that prices for cash beans in some areas may be well below support levels. Without storage facilities for the 1953-crop soybeans, either on-farm or commercial, the price support program is worthless. There must be a place to store the beans or the producer might be forced to take much less than support level—just as has been the case on other crops recently.

ARKANSAS IS OUT IN FRONT Buyers of American soybeans in foreign countries have apparently been much better satisfied with shipments from the 1952 crop. Foreign material, one of the major problems, has become less of a factor. One reason has been the automatic federal appeal called by most buyers at time of export cargo loading. Strangely, the percentage of foreign material contained at delivery point has been consistently less since such shipments were instituted.

But there are still major problems involved in soybean grading. We are trading soybeans on standards developed for carbohydrate crops, modified slightly. We are not, in our grading standards, giving due consideration to the value of the end products—the oil and meal. Until we do so we will never evolve a marketing system which will give proper payment to the grower who produces a superior product.

The Arkansas Extension Service, recognizing the situation, and serving an area where the export market is a major factor, is calling a "Soybean Marketing Clinic" at Jonesboro on Aug. 13. Included on the program will be representatives of all segments of the industry. They will spend a day considering present standards and handling systems, and discussing possible improvements. Out of this meeting should come suggestions that will lead to similar sessions in other areas, and to eventual adoption of a soybean marketing system that will reward the man who delivers a high quality product and penalize the man who delivers something the market does not want.

Arkansas authorities are to be complimented on this step forward.

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ACTIVITIES OF YOUR ASSOCIATION

MARKETING. American Soybean Association officials will participate in a soybean marketing clinic to be held in Jonesboro, Ark., on Thursday, Aug. 13.

The clinic has been announced by C. A. Vines, associate director of extension for the University of Arkansas, Little Rock. The viewpoints of producers, handlers, processors and exporters will be presented in an effort to arrive at suggestions for improving the present system of marketing soybeans in Arkansas.

Arkansas marketing problems are conditioned by the fact that a large percentage of its soybean production goes into the export market. People working with the soybean crop need to understand the requirements of exporters as well as processors.

RESEARCH. The American Soybean Association is backing efforts to obtain funds for basic agricultural research in line with the goals established by the Research and Marketing Act of several years ago.

So far Congress has not appropriated the funds to implement the research program of the Act. Secretary of Agriculture Benson favors a strong research program, but so far Administration recommendations for research funds have not come up to expectations.

Soybean research in the U. S. Department of Agriculture has suffered to an alarming extent the last few years due to the cutting of appropriations. The Association has gone on record in favor of a stronger research program.

Chester B. Biddle, Remington, Ind., ASA president, attended an informal meeting with Benson in Washington, D. C., June 19, when the question of restoring basic agricultural research in the Department of Agriculture was explored. A number of commodity groups were represented. They included both grain and livestock associations.

MARGARINE. Dairymen failed by a small margin to get enough petition signers to force the yellow margarine law in South Dakota to a vote of the people.

The last session of the South Dakota legislature repealed the ban on yellow margarine. Groups in the state began circulating the petitions to refer this law and three others to the voters in the 1954 general election. A total of 28,700 signers on file by June 4 was necessary to get the question on the ballot.

The effort was opposed by the South Dakota Retailers Association and the American Soybean Association.

There appeared to be little doubt that the outcome of such a referendum would favor yellow margarine and that the resulting publicity would be helpful to margarine sales, as it has been in other states where the question has come to a vote. A recent poll by the Sioux Falls Argus-Leader showed 77 percent of the people polled in favor of yellow margarine, and 63 percent of the farmers.

But such a referendum would have delayed the appearance of yellow margarine in the state until 1955.

MELLORINE. The bill to set up Mellorine standards in Alabama, sponsored by the National Cotton Council and other oilseed groups, has passed both houses of the Alabama legislature.

A similar bill earlier passed the Arkansas legislature. It was backed by the American Soybean Association, the National Cotton Council and other groups.

Illinois House Bill 578 to set up standards for vegetable oil frozen desserts has passed both houses, the Senate in the closing days of the session which ended June 30.

The American Soybean Association withdrew its opposition after two ASA-sponsored amendments were accepted. The bill is recognized as not entirely satisfactory. One that will better define the product may be introduced in the next session of the legislature.

Illinois Directors Albert Dimond, Lovington, and Carl Simcox, Assumption, represented the Association.

ASA organized the opposition to Illinois Senate Bill 577. As passed by the Senate, it would have required an edible tracer in any food fats, both animal and vegetable, other than milk fats manufactured by a firm that also manufactured dairy products.

The bill was referred to the agricultural committee of the House which voted after a hearing to recommend that the bill do not pass. The House did not override the committee action and so the bill is dead for this session.

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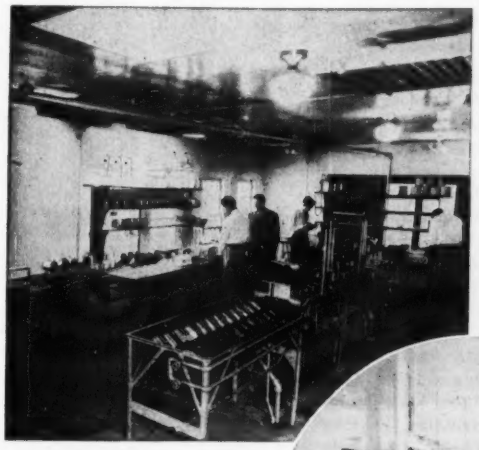

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ROTATIONS, VARIETIES--

There Are Just Two Ways to Control Soybean Diseases

(Staff Written)

UP TO NOW soybeans have been considered quite free of both pests and diseases compared with other crops.

But they can no longer be ignored. Both disease and insect pests are causing considerable damage in some areas.

It will pay the alert producer to be on the lookout. And to know what to do. We have asked a considerable number of soybean disease men and entomologists what diseases and pests are most apt to be prevalent this year in the various sections, and also the best methods of control.

The information that follows is a result of our queries. It is by no means complete.

For a more detailed treatment of diseases see Circular 676, "Soybean Diseases in Illinois," by Donald Chamberlain and Benjamin Koehler, University of Illinois, Urbana, Ill. Also the U. S. Department of Agriculture is publishing a new circular on the subject by soybean disease specialists. The Soybean Digest will review it.

You can control pests when they attack soybeans. But if you find disease in your fields this summer it will be too late to do much about it. Any control measures should have been taken long before.

There are only two basic ways to control soybean diseases:

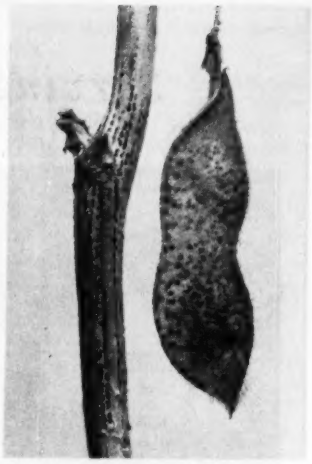
1—Crop rotation will control or slow up diseases that winter over on infected leaves and stems from last year's crop, and diseases that winter over in the soil itself. Growing soybeans after soybeans is a poor system if you are troubled with disease. It allows disease organisms to build up in numbers and cause greater losses from year to year.

2—Use of disease resistant varieties. This is the big hope but it lies mostly in the future. Varieties are available with resistance to some diseases, but there are none resistant to other diseases. Our experiment stations are hard at work on this problem. Resistant varieties are coming, but they will take time.

In the meantime you can help control disease by avoiding planting seed from infected fields where possible—if the disease is carried by the seed. Use seed treatment if you must plant infected seed or seed that has been mechanically injured.

You can use sanitary practices to prevent the spread of bacterial diseases. Disease bacteria are spread throughout the field on farm machinery if infected fields are cultivated when leaves are wet.

And good cultural methods will put your crop in condition to withstand both disease and pests. Says



POD AND STEM blight is one of the three most important diseases in Iowa.

W. M. Scott, Tallulah, La., producer, "We find that if we can get started with a good stand of vigorous, healthy beans we have little to worry about from the standpoints of disease or insects. There are exceptions, of course."

Nobody can tell in advance what diseases may strike this summer. Here are some disease men think may be prevalent:

STEM CANKER. At present one of the most destructive diseases in Ontario, Iowa, and central and northern Indiana. Present in Illinois.

Shows up in dried appearance of upper part of plant and brown lesion at node where first branch arises. Reddish-brown canker may girdle stem and kill plant.

Disease is seed-borne but rotation and use of clean seed does not seem

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to control. Resistant varieties offer most hope.

Canadian varieties Harman and Harosoy have some resistance. Hawkeye and Blackhawk are most susceptible.

BACTERIAL PUSTULE. Found in Illinois, Iowa, Missouri and Indiana. A warm weather disease. Appears from early to mid-July.

First symptoms are small yellow-green spots with reddish-brown slightly raised centers that develop into pustules.

The disease apparently over-winters on infected leaves and may be seed-borne. Crop rotation may help but real control waits on resistant varieties, now on the way. The southern variety, CNS, is resistant.

WILDFIRE. Found in localized areas in Indiana and in Missouri, apparently only where bacterial pustule is present. Easily recognized by yellow halo with well-marked margin that develops around a central area of brown, dead tissue.

There are no controls known except the control of pustule.

FROG-EYE LEAF SPOT. Was very serious in Indiana until 1950 but has since been checked by use of Lincoln and Wabash varieties which are resistant.

Disease produces a characteristic leaf spot with light center and dark purple border with no yellowing in surrounding tissue.

The new Clark variety is resistant. Hawkeye is very susceptible.

BACTERIAL BLIGHT. Hits early, usually in June. Its development is favored by a cool season. The disease is seed-borne.

Found in Missouri, Iowa, Illinois and Indiana.

Identified by small, angular spots on leaves of yellow to brown color. Severe infection causes leaves to drop.

If possible, get seed from fields free of bacterial blight. Hawkeye has some resistance.

BROWN SPOT. Probably the most prevalent disease in Indiana, though it varies from year to year in severity. Seen in Iowa. The first disease to appear in spring.

Shows up in angular, reddish-brown spots on leaves. Infected leaves turn yellow and drop.

Disease over-winters in crop residues. Rotation helps. Resistant varieties may also be developed.

BROWN STEM ROT. Important in Ontario, Minnesota, Illinois and Iowa, its severity depending on the weather. During hot weather it makes slow progress.

Shows up in scalded and blighted leaves. Split open the stem and you will find a characteristic browning on the inside.

Varieties developed at the Harrow station in Ontario show some resistance, but there are no other known resistant varieties.

The organism lives in the soil. Control through crop rotation. The disease is seldom bad except where soybeans follow soybeans.

ROOT AND STEM ROT. One of the three most important diseases in Iowa. Also appeared in Illinois in 1952 but did little damage. Produces a reddish-brown decay of the outer layer of the root. Resistant varieties are being developed.

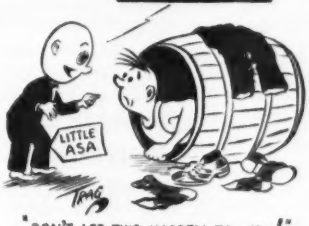
POD AND STEM BLIGHT. Widespread in Illinois. Usually appears late in the season on maturing plants.

Dead plants appear with leaves still attached. Such plants have small black dots scattered over the stems and pods.

The disease over-winters on infected stems and seed. Control through crop rotation and clean seed.

For a discussion of soybean diseases in Canada see the article by Dr. A. A. Hildebrand starting on page 18. Article on pests follows on page 10.

I WARNED YOU TO GET YOUR HOTEL RESERVATIONS EARLY



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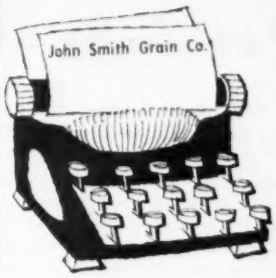

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You Can Control All Known Pests--by Starting in Time

(Staff Written)

WEATHER has favored the development of insect pests this year, and losses have been severe on other crops. What about soybeans?

Luckily soybeans are usually not seriously attacked by insect pests. Many insects will feed on soybeans but they usually do not do great damage.

But occasionally pests do require control measures. For instance, grasshoppers have been known to strip fields in Illinois. And areas in the Midsouth had to be sprayed in 1952 for the corn earworms and green cloverworms.

The three most serious pests of the soybean are probably grasshoppers, the Mexican bean beetle and the velvetbean caterpillar, according to A. M. Vance of the Bureau of Entomology and Plant Quarantine, Washington, D. C.

Says Vance: "Grasshoppers are widely distributed, whereas very severe damage to soybeans is usually rather localized.

"Moths of the velvetbean caterpillar migrate from the tropics into the Southern states each year and intermittently they cause considerable damage to the soybean crop. In some years they have been very injurious in Louisiana.

"The Mexican bean beetle has damaged soybeans seriously in the last few years in our Southeastern states. It has been reported as responsible for the slow increase in soybean acreage, especially in Florida."

VELVETBEAN caterpillar is a serious threat in parts of the South.

DDT and toxaphene apparently have the widest application as insecticides in the control of insect pests working on soybeans. Dusting or spraying with airplane and ground equipment is effective.

Be sure that manufacturers' recommendations are followed exactly as to concentration and rate of application of chemicals. Some are highly toxic.

For a more complete article on control of insect pests see, "Insect Pests of Soybeans and Their Control," by C. M. Packard in February 1951 Soybean Digest.

Here are some pests that may be serious, areas where they may appear, and recommended control measures:

GRASSHOPPERS. Widely distributed. Most apt to be serious after a succession of dry seasons. Control them on roadsides, fence corners and grass before they spread to soybean fields. Sprays and dusts are usually more effective than poison baits in dense vegetation such as soybeans, according to Packard.

Here are recommendations of W. A. Price, state entomologist, University of Kentucky, for insecticides used as a spray:

Aldrin, two ounces active ingredient per acre for young grasshoppers; four ounces for old ones.

Chlordane, one pound active ingredient per acre for young grasshoppers; one and one-fourth pounds for old ones.

Toxaphene, one and one-half pounds active ingredient per acre for young grasshoppers; two pounds for old ones.

The emulsion form of insecticide is best adapted to weed sprayer equipment. If dusts are used the dosage should be increased by 50 percent.

MEXICAN BEAN BEETLE. Serious in the Southeastern states. Is one-third inch long, copper colored with 16 small black spots on its back. The larva is a yellow spiny worm about one-third inch long when full grown.

Pest feeds mostly on the under side of leaves and the larvae do most of the damage.

For control use a dust containing .75 to 1 percent of rotenone or a 5-percent methoxychlor dust at 30 pounds per acre. Apply to the under side of leaves.

BEAN LEAF BEETLE is a smaller species about one-fourth inch long, reddish to yellowish in color and with four black spots on its back and a black band around the margin of the wing covers.

It occurs farther north in states as widely scattered as Mississippi, Iowa, Indiana and Delaware. The pest eats holes through the leaves.

Pest can be controlled with one and one-half pounds of actual DDT per acre. This will control thistle caterpillar, also, if in the same field. Or use rotenone or methoxychlor dust same strength as for Mexican bean beetle.

VELVETBEAN CATERPILLAR. Found in Southern states only. The grown caterpillar is about one and one-half inch long. It is usually black but is sometimes green with a green stripe down the middle of the back and from one to three light stripes along the sides.

Late varieties of soybeans are most often injured. Caterpillar will begin on the tender top leaves and work down the plant. It may eat leaves and buds completely as it goes.

To control, dust with 5-percent DDT or 10-percent toxaphene. Use 20 pounds per acre.

CORN EARWORM (cotton bollworm). Also green cloverworm, fall armyworm, variegated cutworm or other climbing cutworms frequently damage soybeans. They are all leaf feeders except the corn earworm which feeds on developing soybean seeds and may be identified by injured pods.

They are easy prey for chlordane, DDT, or toxaphene dusts or sprays. For leaf feeding worms R. R. Walton and C. F. Stiles of the Oklahoma Agricultural Experiment Station recommend:

DDT, one-half to three-fourths pound actual toxicant per acre (10

to 15 pounds of 5-percent dust or two to three pints of 25-percent emulsifiable concentrate).

Toxaphene, one to one and one-half pounds actual toxicant per acre (10 to 15 pounds of 10-percent dust or one and one-half to two pints of 60-percent emulsifiable concentrate).

For corn earworm, use DDT, one and one-half to two pounds of actual toxicant per acre (15 to 20 pounds of 10-percent dust or three to four and one-half quarts of 25-percent emulsifiable concentrate).*

BLISTER BEETLE. Injurious in the Southern and Central states. They may strip small areas. Slender, black, gray or striped, one-half to three-fourths inch long.

They can be completely controlled with immediate application of 5-percent DDT dust or 20-percent toxaphene. Use 15 or 20 pounds per acre.

WHITE GRUBS. Reported active on soybeans in Indiana and Illinois. One species is expected to do considerable damage in an area from Champaign to Knox Counties, Illinois.

*See Mimeographed Circular M-239, "The Control of Caterpillars Attacking Soybeans," by R. R. Walton and C. F. Stiles, Oklahoma Agricultural Experiment Station, Stillwater, Okla.

Most damage is done where soybeans are grown alternately with corn. Include other crops in the rotation to break up the grub cycle.

THISTLE CATERPILLARS. Cut some yields in Iowa five bushels per acre last year and may appear again this year, according to R. J. Walstrom, extension entomologist at Iowa State College.

Feed heavily on Canadian thistles and shift to soybeans when they appear, inflicting heavy damage.

Spraying with two pounds of actual toxaphene per acre gives good control.

SEED CORN MAGGOT. Reduces stands in Iowa by burrowing into seed when it germinates.

Walstrom says control is to disk in two pounds of actual chlordane per acre before seeding in known infested fields.

—s b d—

NUTRITION SCHOOL

The annual nutrition school for feed men at Iowa State College, Ames, Iowa, will be held Sept. 11.

The school is jointly sponsored by Iowa State College, the Feed Institute, and the Western Grain and Feed Association.

THE COVER PICTURE

PLYWOOD HAS many uses in the modern home and elsewhere—the demountable music wall shown on the cover for instance, where the girl uses one speaker to serve television, record player and radio.

Soybean producers are interested. Soybean glue, which is made from soy flakes, is the leading adhesive used by the plywood industry, and it is now a 60-million-pounds-a-year market.

A few years ago soybeans seemed to be losing out to other sources, but the new cold press process to which soybean glue is adapted gives it the edge. It has the double advantage of being a cheaper source and through the cold press process of making for speedier production of plywood.

The picture is furnished by Monsanto Chemical Co.

If you are interested in the construction plans for the music wall shown on the cover you can obtain them from Douglas Fir Plywood, 500 Fifth Ave., New York City; or Tacoma, Wash., for 10 cents.

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AMERICAN SOYBEAN ASSOCIATION

Late News

Hudson, Iowa, July 10, 1953

Published 32 times yearly as a service to the soybean industry.

CCC TAKE-OVER OF SOYBEANS

Latest estimates are that about 4 to 5 million bushels will cover the volume of soybeans to be taken over by Commodity Credit Corp. from 1952 price support operations. By early July about 3 million bushels were reported to have been delivered to CCC.

We were given to understand that all CCC beans would be exported. **But early in July carlots of farm-stored beans were being moved into federal inspection points, graded and sold to processors.** Twenty-eight cars had been sold through the Chicago office of CCC as of July 7, according to an official there. **All were sold at 4 to 5 cents above the July market, he said.**

The 1.9 million bushel figure offered by CCC for export and domestic sales could not be checked by men in the field. **No commercially stored beans have been offered on the domestic market to date.**

SOYBEANS ON FARMS

Apparently farmers are still holding considerably more beans than in past years at this date. **States where from 3 to as high as 10 percent of last year's crop still remain in farmers' hands in certain localities include Illinois, Iowa, Minnesota and Ohio.** Elsewhere the 1952 crop is apparently about cleaned up.

CCC MEAL

CCC offer of stocks of cottonseed meal and pellets at reduced prices to drought-hit farmers in the Southwest has been a factor in depressing the soybean oil meal market. **CCC offered the meal in drought areas at $35 a ton compared with the regular price of $57 to $59 a ton.** The feed industry said buying from the Southwest completely dried up after the announcement.

CROP NOTES

Soybean acreage is definitely down in large parts of the Midsouth, including Arkansas, Mississippi and Oklahoma. A very wet May combined with little rain since has resulted in many beans not being planted. Many that were planted have made poor stands. **Acreage in this area will be down 5 to 25 percent, according to our reports.** An exception is western Tennessee, where some cotton land went to beans and acreage is up 8 to 10 percent.

Other acreage changes as indicated by late reports: Escambia County, Fla., up 50-60 percent, with growing conditions very good; western Iowa, up 10 percent on Missouri River bottoms; Kansas down 15 percent, with increases in local areas; Missouri up 5 percent.

Crop condition is reported as exceedingly good over most of Illinois, Indiana and Iowa, though there are dry spots in Illinois. **"Farmers never saw corn and beans look better" in much of the area.** But weather is dry in parts of Ohio, southwestern Missouri, Kansas and Nebraska, in addition to the Midsouth area mentioned above. (For complete earlier crop report see page 23.)

STORAGE FOR 1953 CROPP

With probable shortages of storage space in heavy wheat and corn producing areas this fall, will there be room for new-crop beans? Some in the trade say it is time to take stock of the situation. **Most of our reporters indicate there will be enough storage for soybeans in their respective localities, and do not seem to be much worried about the situation as yet.** Exceptions are western Illinois, parts of Kansas, Missouri, west central Ohio, where there will be a shortage of space for corn if not soybeans, and Escambia County, Fla. Storage apparently may be tight in these areas.

FATS, OILS SURPLUS

Surplus production of fats and vegetable oils in the U. S. will continue at least through 1954 unless crop weather is adverse, E. K. Scheiter of A. E. Staley Manufacturing Co., Decatur, Ill., told the International Association of Seed Crushers in Holland July 1. **Scheiter said U. S. carry-over of edible fats and oils will reach 1.6 billion pounds, 84 percent higher than last year, by Sept. 30.**

STRAWS IN THE WIND

There is considerable selling of new crop soybeans at $2.40 or better in the Champaign, Ill., area, according to J. E. Johnson. Buyers in the Wichita, Kans., area are talking $2 to $2.25 for the 1953 crop. (September soybeans in Chicago are quoted at $2.62.)

Quoting C. F. Marshall, Mankato, Minn.: "We face a big movement next October at the same time feed manufacturers will be buying meal on a hand-to-mouth basis. Same with the oil buyers. This will make hedging beans in meal and oil sales very restricted. With the speculators having lost so much money this year, I fear the futures markets will be restricted in volume. **If farmers want a fair price during the crop year they will have to sell their beans in a more orderly fashion."**

IOWA MARGARINE

The state of Iowa has been enjoined temporarily from enforcing the imprint provision of the Iowa margarine law by District Judge D. D. Needham, Des Moines. As passed by the recent session of the legislature, law requires imprint of word "oleo" on each quarter-pound section. A test case has been brought by a margarine manufacturer and an Iowa grocer.

	Cash price to farmers for No. 2 soybeans July 2	Retail cash price bagged soybean oil meal July 2
Ark.	$2.50 @ $2.60	$78
Ill.	2.54 @ 2.65	80 @ $83
Ind.	2.50	94
Iowa	2.51	88
Kans.	2.46	87
Minn.	2.48 @ 2.50	87 @ 90
Mo.	2.52 @ 2.55	88
Ohio	2.50 @ 2.56	90
Tenn.	2.55	75
Ontario	2.55 @ 2.60	

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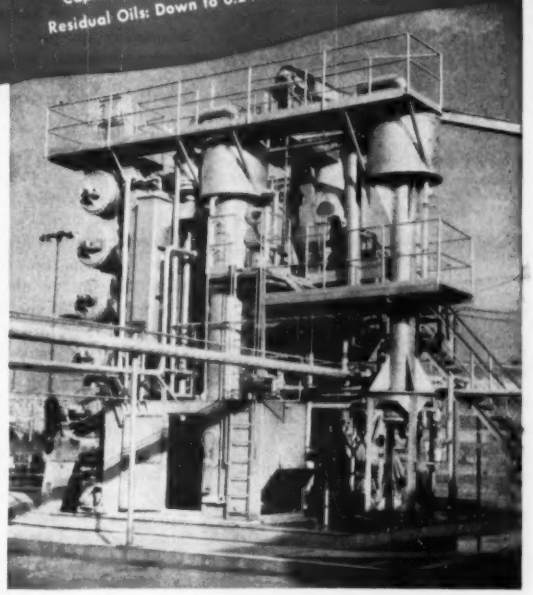

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JACKSON SOYBEAN

May Lower Growers Costs in Southeast

LOWER PRODUCTION costs per bushel for growers in its adapted area is the promise of a new variety of soybeans to be called Jackson announced July 1 by the U. S. Department of Agriculture and cooperating state agricultural experiment stations in the Southeast. It is the 12th in a series of superior varieties for the different producing areas that have been released in the last dozen years.

Seed of the new Jackson variety will be released to selected certified seed growers in Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana for increase plantings in the spring of 1954. Seed for general planting by farmers in the adapted area will not be available until the spring of 1955.

The adapted area of Jackson includes a very small section in south central Virginia bordering North Carolina; all the central belt through North Carolina; the eastern two-thirds of South Carolina, most of the southern half of Georgia, Alabama, and Mississippi; the northeastern two-thirds of Louisiana; and the northern part of Florida along the Gulf Coast. This is approximately the same area, with minor variations, in which the variety Roanoke is now generally recommended.

Jackson is not considered to be a replacement variety for Roanoke, except possibly where height is needed and where lodging is an important factor as on bottom lands and better soils. Although Jackson is considered by the breeders to be best adapted to lighter soils in its adapted area, it has also performed well on heavy, poorly-drained soil. Its adequate height in areas with light soils, where most varieties now grown for beans are too short, and its resistance to lodging in areas where rank growth is produced, give Jackson a range of adaptation unequalled by other varieties of similar maturity.

MATURE individual plant of the new Jackson soybean, showing good height, relatively small stems, and placement of pods well above the ground level.

JACKSON soybeans on right, Dorman on left, showing relative maturity. Note also height of Jackson. Looking over the plots is Dr. Martin G. Weiss, director of field crops research for USDA.

High Yield Important

In most of the area where Jackson is adapted farmers must use commercial fertilizers to produce profitable yields of soybeans. As a result of price adjustments in recent years, farmers' margin of profit has decreased so it is important that the highest yields possible be obtained. Several characteristics of the Jackson variety should enable farmers to produce soybeans at a lower cost and a greater profit than has been possible with varieties now grown in the area.

In relation to Roanoke, for example, Jackson has averaged 1½ bushels more in its adapted area. Roanoke is the most productive and widely grown of the older varieties in the same maturity class with Jackson. Jackson is slightly later in maturity than Roanoke.

Along the East Coast in Virginia and in North Carolina Jackson has averaged about 1.6 bushels per acre more than Roanoke. In the upper and central part of its area at Clemson, S. C., it has averaged only ½ bushel per acre more than Roanoke. In the area from Georgia west to Louisiana the yield of Jackson has averaged 1.2 bushels more per acre than Roanoke except in the lower Delta area where Jackson has given a 2.4-bushel increase.

Considering its entire adapted area, yields of Jackson over a three-year period and at about 20 locations have averaged 31.9 bushels an acre compared with 30.4 bushels for Roanoke and 29 bushels for Dortchsoy 31. It averaged about two days later in maturity than Roanoke and six days later than Dortchsoy 31, averaged 39.6 inches in height as compared with 36.5 for Roanoke and 29.4 for Dortchsoy 31.

Lodging Resistant

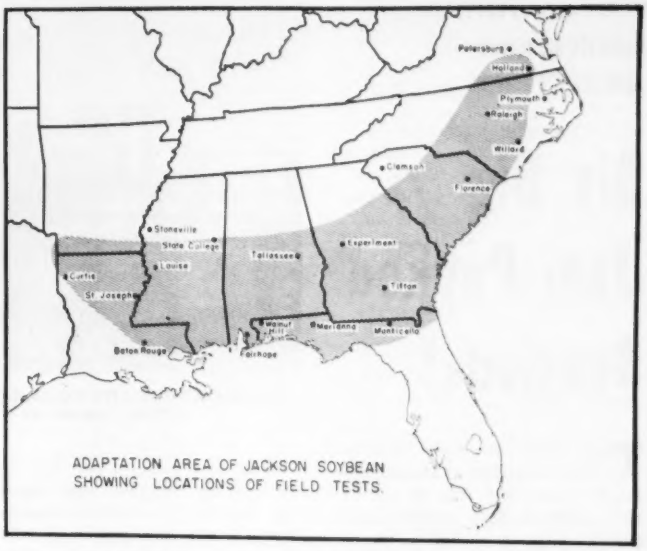
In lodging resistance Jackson scored 1.7 compared with 2.2 for Roanoke and 1.7 for Dortchsoy 31, based on a 1-5 scoring system with 1 representing very good and 5 very poor. In seed quality Jackson scored 1.7 compared with 1.6 for Roanoke and 1.9 for Dortchsoy 31, with oil content averaging 21.7 percent for Jackson, 22 percent for Roanoke, and 20.9 percent for Dortchsoy 31.

The plant characteristics of the Jackson variety are similar to those of Roanoke and Volstate, having white flowers. The plant has comparatively small stems, produces its lowest pods several inches above the ground level, and is more resistant to lodging than similar varieties. The

latter characteristics are an aid in harvesting, permitting greater speed in combining and less wear on the machine in addition to reducing harvesting losses of beans. This economy in combining along with capacity of the variety to produce higher yields at a given rate of fertilization than other varieties of similar maturity is expected to contribute to more profitable production.

The seed of Jackson is straw yellow in color, but easily distinguished from seed of Roanoke and Volstate because of its distinctive brown eye.

The Jackson variety traces its parentage to the varieties Volstate and Palmetto. The original cross was made in 1943 by Dr. E. E. Hartwig of the U. S. Regional Soybean Laboratory, working in cooperation with the North Carolina Agricultural Experiment Station. A backcross of the F_1 was made to Volstate in 1944. The objective was to produce a variety for the lower southeastern part of the United States that would grow tall like Palmetto and have the good seed holding and chemical qualities of Volstate. Jackson has the desired characters, but its range of adaptation is wider than the breeders anticipated.



ADAPTATION AREA OF JACKSON SOYBEAN SHOWING LOCATIONS OF FIELD TESTS.

Comparison of the Jackson soybean with Roanoke and Dortschoy 31 at about 20 locations in its adapted area over a three-year period

Variety	Maturity (date)	Height (inches)	Lodging (1-5)*	Seed quality (1-5)**	Seeds per lb.	Yield bu./acre	% Oil	% Protein content	Iodine value of oil (no.)
Jackson	10-26	39.6	1.7	1.7	2865	31.9	21.7	40.1	135.5
Roanoke	10-24	36.5	2.2	1.6	2840	30.4	22.0	39.8	134.4
Dortschoy 31	10-22	29.4	1.7	1.9	2982	29.0	20.9	41.1	136.5

*Based on a score of 1-5; 1 is erect, 5 is badly lodged.
**Based on a score of 1-5; 1 is very good, 5 is very poor.

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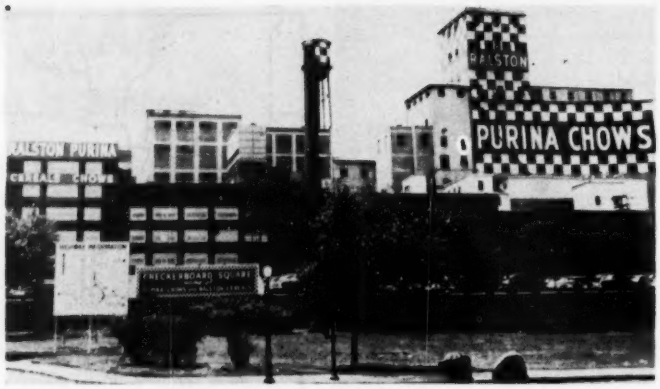


CHECKERBOARD SQUARE, in St. Louis, the home of Ralston Purina Co., makers of Purina Chows and one of the nation's leading soybean processors.

THOSE WHO attend the 33rd annual convention at Hotel Jefferson, St. Louis, Mo., Aug. 20 and 21, are promised four solidly-packed half-day sessions, as well as the annual banquet, a policy meeting and plenty of entertainment for which St. Louis is famous.

An outlook forum proved a very popular feature last year, so is being repeated at this year's convention, the program committee tells us. A panel discussion on "Where Are Soybeans Going?" will feature the final session Friday afternoon. Experts will cover various angles.

In addition there will be sessions devoted to the general subjects of production, soy products and marketing, with the best authorities your committee can find on each subject.

The program of the convention in brief is carried below. A complete program, including speakers and their subjects, will be published in the August issue, which will reach you several days in advance of the convention.

You are urged to make your hotel reservations direct with Hotel Jefferson at St. Louis without delay if you have not already done so. Tell them your reservation is for the American Soybean Association convention, and it will be taken from our block of rooms as long as the block lasts.

For entertainment the Association has reserved blocks of seats for the St. Louis Municipal Opera, "Kiss Me Kate"; and for the Cardinals' home games. Tickets being held are for both Wednesday evening, Aug. 19, and Friday evening, Aug. 21, so you can have your choice of these two nights.

Make your reservation for the opera or the ball game with American Soybean Association, Hudson, Iowa. If you make your reservation through the Association you will be able to sit in the section reserved for convention attendants.

But be sure to make reservations by Aug. 5, as tickets must be turned back by the Association after that date.

Women who have attended Association conventions in increasing numbers of late years, will be recognized with a style show and other activities.

The Convention in Brief

All Sessions in Gold Room, Hotel Jefferson

Wednesday, Aug. 19

2 p. m.—Erect exhibits.

8 p. m.—Policy meeting.

Your choice of baseball game, Cardinals vs. Chicago; "Kiss Me Kate" at St. Louis Municipal Opera, Forest Park; or river excursion on S. S. Admiral.

Thursday, Aug. 20

9:30 a. m.—Convention opens.

9:45 a. m.—Session on soybean production.

Speakers covering varieties, grass and weed control, fertilizer on soybeans and practical production methods.

12:30 p. m.—Style show for the women.

1:30 p. m.—Session on soy products.

Speakers will discuss how to expand markets for soy products.

7:00 p. m.—Annual Association banquet and presentation of honorary life memberships.

Friday, Aug. 21

9:30 a. m.—Annual business meeting, American Soybean Association.

10:30 a. m.—Session on marketing.

Speakers will discuss grades, exports, prices, intelligent marketing, usage of urea, the administration in Washington, and Canada as a continuing market.

1:30 p. m.—Panel discussion, "Where Are Soybeans Going?"

Speakers will cover marketing, soybean oil meal, research, world markets, the federal government and fats and oils.

8 p. m.—Your choice of baseball game, Cardinals vs. Cincinnati; "Kiss Me Kate" opera; and river excursion.

Committees

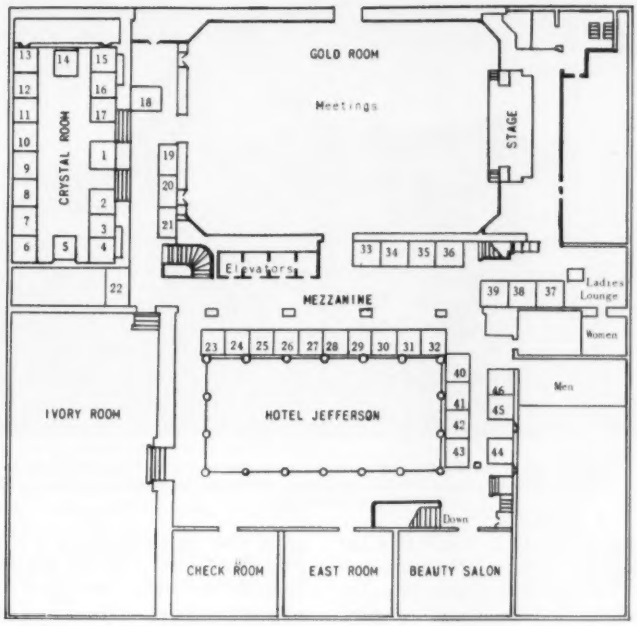
Following are the committees who are in charge of the convention and making all the arrangements:

Convention: Ed Tillman, Caruthersville, Mo., chairman; O. H. Acom, Wardell, Mo.; Albert Dimond, Lovington, Ill.; Carl Simcox, Assumption, Ill.; and Geo. M. Strayer, Hudson, Iowa.

Awards: Jake Hartz, Jr., Stuttgart, Ark., chairman; W. J. Morse, Tuckahoe, N. Y.; and J. B. Edmondson, Danville, Ind.

Nominations: O. H. Acom, Wardell, Mo., chairman; K. E. Beeson, Lafayette, Ind.; and LeRoy Pike, Pontiac, Ill.

Resolutions: David G. Wing, Mechanicsburg, Ohio, chairman; John W. Evans, Montevideo, Minn.; Her-



bert Huddleston, Lamont, Miss.; Henry I. Cohn, Sr., St. Louis, Mo.; and Robert Peck, River Canard, Ontario.

Exhibits

Advance reservations of exhibit booths have been good, but good locations were still available at press time.

Above is the floor plan of the mezzanine floor of Hotel Jefferson where the convention will be held and the exhibits located. The Crystal Room and the entire mezzanine floor except for the meeting room itself will be given over to exhibit space this year.

All 46 exhibit booths are in easy access of the meeting room.

Below are listed booths that have been reserved. By comparing them with the diagram you can tell which were still available at press time.

For booth reservations or information phone, wire or write: Geo. McCulley, business manager, American Soybean Association, Hudson, Iowa.

1—A. T. Ferrell & Co., Saginaw, Mich.

8—Blaw-Knox Co., Pittsburgh, Pa.

9—Dave Fischbein Co., Minneapolis, Minn.

10—National Association of Margarine Manufacturers, Washington, D. C.

11—Urbana Laboratories, Urbana, Ill.

16—V. D. Anderson Co., Cleveland, Ohio.

18—U. S. Rubber Co., New York, N. Y.

19, 20—Frisco Railroad, St. Louis, Mo.

21—Seedburo Equipment Co., Chicago, Ill.

23, 24, 25—Penola Oil Co., Detroit, Mich.

26—French Oil Mill Machinery Co., Piqua, Ohio.

27—Gates Rubber Co., St. Louis, Mo.

28—R. W. Booker & Associates, St. Louis, Mo.

29—Butler Manufacturing Co., Kansas City, Mo.

32—The Soybean Digest, Hudson, Iowa.

33—Merrill Lynch, Pierce, Fenner & Beane, New York, N. Y.

—sbd—

RULING ON CHIL-ZERT

Chil-zert, a frozen food product manufactured by Rich Products Corp., Buffalo, N. Y., is an imitation of chocolate ice cream and therefore misbranded under the Food, Drug and Cosmetic Act, Judge Brennan of the Federal District Court in Syracuse, N. Y., has ruled.

Chil-zert, which employs vegetable oils, is manufactured without the use of any dairy product. Judge Brennan held that the resemblance to chocolate ice cream in character and method of manufacture, packaging, sale and use, together with the use of a "cheaper ingredient," namely vegetable oil, required the conclusion that the product was in imitation.

Robert E. Rich of Rich Products Corp. has announced he will appeal the decision.

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SOME ASPECTS OF Soybean Diseases In Ontario[1]

By A. A. HILDEBRAND[2]
Science Service Laboratory, Harrow, Ontario

—Digest Photo by Pellett

DR. A. A. HILDEBRAND in soybean disease test plots at the Dominion Experiment Station at Harrow, Ontario. Over 14,000 different inoculations for diseases have been made in the plots.

IN GENERAL, the disease situation throughout the high-production area of southwestern Ontario was less serious last summer than in several preceding years.

Even stem canker, the disease that we have reason to fear the most, was not as severe as in 1949, 1950, and 1951, except on the variety Lincoln which, when grown on highly fertile soil, was very severely infected. In previous years the observation has already been made that there seems to be a close correlation between high soil fertility and greater incidence and severity of the disease.

I do not know for certain why stem canker and other diseases, including the potentially dangerous brown stem rot, were less seriously widespread in 1952 than in previous years; but I would venture the opinion that the kind of weather we experienced last summer in our part of Ontario was at least partially responsible. The disease was certainly present on almost as many plants of several varieties as usual, but it didn't seem to be able "to take hold and get under way."

If, late in August, you had crawled on your hands and knees along the rows—as I did in many fields—and examined the lower stem region of plants, you would have found many small, dead spurs and leaf petioles, most of them "peppered" with tiny black dots that indicate the presence of the disease. However, infection from such affected spurs and petioles did not seem to be able to proceed into the main stem; nor was there as much infection as usual higher on the stem through leaf scars which constitute a weak point in the defenses of the plant against the attack of this particular disease. I surmise that the unusually dry weather had a lot to do with the confining of the disease to areas of initial infection.

Now, stem canker is caused by a fungus, and fungi must have adequate moisture for their development. You will recall, for instance, that in the humid atmosphere of a closed container bread will mold much more quickly and more completely than if it is left in the open where air can circulate around it freely.

When, as the result of rain, the soil is moist, the atmospheric conditions that obtain between the rows in a soybean field do not differ greatly from those that exist in a closed bread box. As the result of evaporation from the wet soil, a blanket of sluggish, moisture-laden air, protected from air currents by the foliage of the plants, en-

[1]Based on an address delivered, by invitation, at the meetings of the third annual Ontario Soybean Convention in Chatham, Ontario, Feb. 4, 1953. Contribution No. 1269 from the division of botany and plant pathology, science service, Department of Agriculture, Ottawa, Canada.

[2]Senior plant pathologist.

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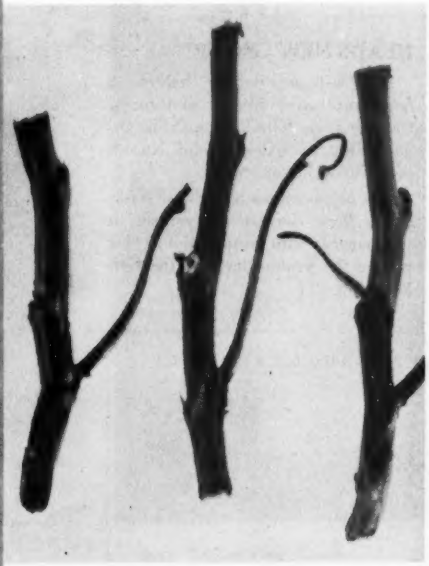
velops the lower stem region and creates an environment highly favorable for the development of a fungus such as the one causing stem canker. If, on the other hand, the soil is dry, the air is correspondingly dry and as a result the activity of the fungus is depressed.

Under more favorable weather conditions, there is no guarantee that stem canker will not reappear in Ontario this year, or some other year, over as widespread an area and with as severe effect as formerly.

Now I should like to say a few words about varietal resistance and susceptibility to stem canker. On Sept. 9, 1952, widely separated test plots established by Victory Mills, Ltd., in the fields of interested and cooperative growers were visited and the incidence of stem canker among many thousands of plants representing five of the more commonly-grown varieties was determined, with results as recorded in the table on page 20.

A glance at the table shows not only that stem canker occurred on all varieties at Port Alma in Kent County but also that the disease occurred more severely on the varieties there than at the two other locations in Es-



STEM CANKER has infected and killed spur on lower stem of each of these three soybean plants. On the spur of the center stem may be noted the black dots indicating the presence of the fungus. Stems were photographed Aug. 19, 1952.

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Percentage Incidence of Stem Canker, Sept. 9, 1952, on five different varieties at three widely-separated locations

	Location of plots		
	Kent County	Essex County	
Varieties	Port Alma	Woodslee	Paquette
Harman	8.7		
Harosoy	5.7	3.7	3.5
Lincoln	18.5	2.2	2.0
Hawkeye	26.1	3.7	4.5
Blackhawk	54.7	9.2	7.0

sex County, and, in addition, that at all three locations the varieties Harman and Harosoy were least susceptible, Lincoln was intermediate in susceptibility, and Hawkeye and Blackhawk were consistently most susceptible to the disease. Last year, the varieties just mentioned occupied the same relative positions in the scale of resistance and susceptibility.

The soil at Port Alma in Kent County where stem canker occurred most severely was a somewhat gravelly, porous type and markedly in contrast to the Brookston clay in the two Essex County locations where the disease was of almost negligible significance. In the former location the plants of all five varieties were in a more advanced stage of maturity than those at the two latter localities. In previous years it has been observed similarly that the disease tends to be more severe on plants growing in the shallower and more porous types of soil. In such soils, drouth conditions are accentuated and plants are hurried into a more or less premature state of maturity, in which condition they seem to be more readily susceptible to attack by the disease.

In summarizing briefly, a number of factors may have an influence on a disease such as stem canker. These factors include the degree of fertility and the physical condition of the soil, the kind of weather that prevails, and the difference in resistance and susceptibility of varieties. When it is realized what a broad scope there is for variation in one or more of these factors, it can be the more readily understood why the disease may vary widely in severity from year to year and from location to location.

One of the most important points about stem canker—and at the same time the most difficult one on which to acquire accurate information—is that of how much loss we actually sustain from the disease. Basing estimates on fairly careful and comprehensive observation during the past several years, I would suggest that depending upon the extent and severity of the disease, losses in Ontario range annually from 4 to 10 percent of the total production.

The value of the 4,128,000 bushels of soybeans that were produced in Ontario in 1952 has been mentioned officially as $11,063,000. I would say that 1952, in Ontario, was an approximately 4-percent-loss year, i.e., about $450,000. In 1949, 1950, and 1951, losses due to the disease would be approximately double that amount. According to the Soybean Digest for September 1952, the loss in Iowa alone from stem canker in 1951 was estimated at nearly 4 million dollars.

When I come to these meetings and speak to you on the subject of disease, I do not come as an alarmist or as one ready to hang the crepe on the door of the soybean industry. Certainly there are soybean diseases; but it is highly improbable that they would ever of themselves put the soybean industry out of business. Nevertheless, I know that the disease stem canker is taking an appreciable cut at our over-all production. My plea is to attempt by all means possible to keep the industry equally healthy so far as diseases are concerned.

You as growers can do your part by recognizing the fact that, if disease has appeared in your fields, crop rotation is highly important from the standpoint of preventing the build-up of disease-causing organisms. In this connection, I am thinking not only of stem canker, but of at least two other soil-borne diseases—brown stem rot and pythium stem and root rot—that are also potentially dangerous if soybeans follow soybeans in contaminated soil.

Also, in the case of stem canker, at least, you may choose a variety or varieties that are less susceptible than others to the disease. Also in reference to stem canker, it has been reported that the disease is less prevalent in later-planted fields.

Such methods as I have outlined are at best only stop-gap measures of control. Stem canker will not be controlled until a resistant variety is found. Unfortunately, at the moment, no such variety is available. Search for one, however, is going on constantly in many of the agricultural experiment stations in the United States. It is to be hoped that their efforts and our own may be productive of a variety that will lessen the threat of stem canker to the soybean industry.

—sbd—

HEADS NEW GROUP

Dr. William Bening has been named executive director of the new German organization, Non-Profit Organization to Extend Food Knowledge, it is announced.

The organization has official status in the West German government. It is charged with responsibility for raising the protein level of the German diet.

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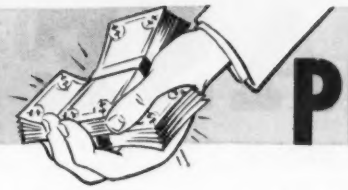

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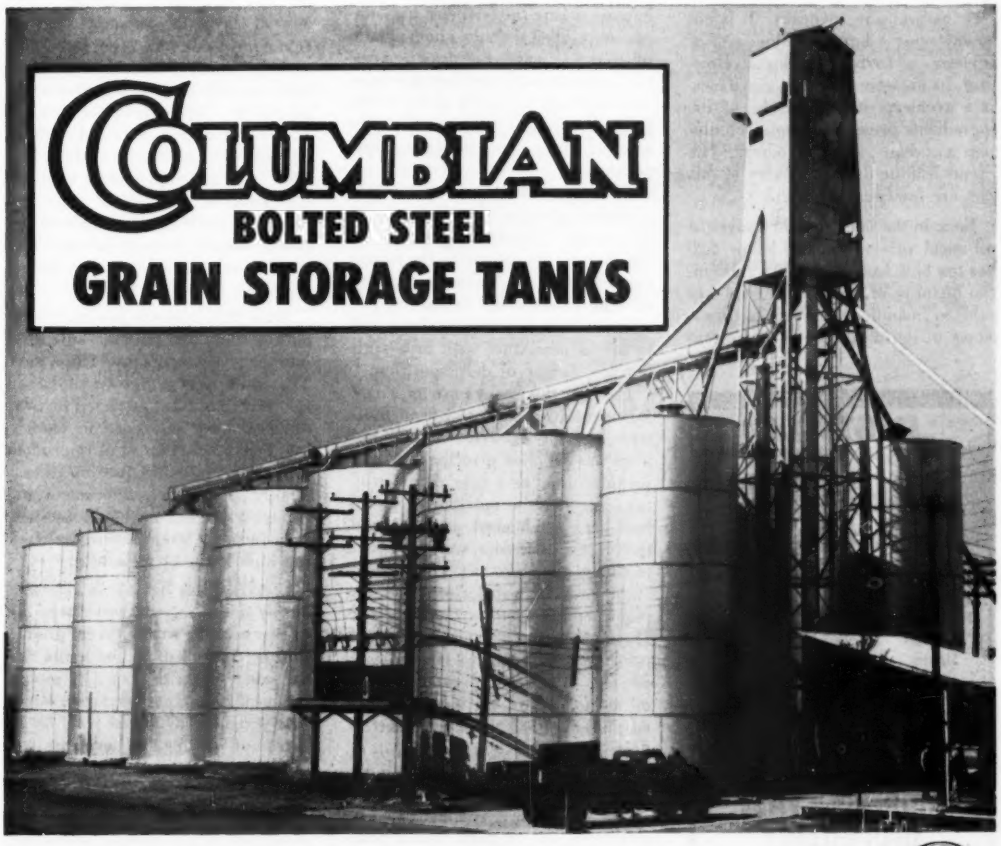

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UREASE

By FRED H. HAFNER
Member, Soybean Research Council

● *Use of urea in ruminant feeding creates problems for the processor and feed mixer and will affect the market for soybean oil meal. How? This is the first of several articles we hope to carry on the subject. The second, also by Mr. Hafner, will appear shortly.*

UREASE IS an enzyme that occurs naturally in soybeans. It is not in any sense a harmful component of soybeans or soybean products. However, its presence may give rise to certain problems if urea is one of the ingredients present in a mix containing a urease active product. The events leading up to discovery of this fact are reviewed herewith.

Back in the late 30's when soybean oil meal prices dropped below $20 per ton bulk Decatur basis, a substantial quantity of soybean oil meal was sold to manufacturers of fertilizer. Some of the meal was of the solvent extraction type which had been thoroughly cooked to eliminate the raw, bean-like flavor of uncooked extracted soybean flakes but which had not been subjected to a separate toasting operation. When this cooked, but untoasted meal, was admixed with several ingredients, including urea, in the manufacture of fertilizer the results were disconcerting, to say the least. Warehouses—where the fertilizer was stored—were filled with the pungent odor of ammonia gas. Fertilizer guarantees were not being met because nitrogen, that was supposed to be in the bag, was escaping into the air. This was our first contact with the urease problem.

After extensive research into the problem, practical value of toasting as a means of inactivating urease was discovered. By subjecting the solvent extracted soybean flakes to a severe toasting process, the urease was destroyed. The resulting meal was safe to use in admixture with urea without any danger of decomposition.

Prior to this experience of adapting soybean oil meal to use in fertilizers, solvent extracted soybean oil meal was supplied principally to feed manufacturers as a pale yellow product. Its protein nutritional quality had been established as good and, therefore, processors were reluctant to change their product. But considerable pressure was put on those who pioneered in solvent extraction of soybeans to produce a product with a color more like that of mechanically pressed 41 percent protein soybean oil meals. Finally, the industry yielded and by 1941 toasted 44 percent protein solvent extracted soybean oil meal was available from solvent processors generally.

At first the meal supplied by most processors was a dark brown product, lacking the golden brown color that characterizes desirable color in 44 percent protein solvent extracted soybean oil meal available today. Processors were soon to learn that dark brown soybean oil meal gave poor results in nutritional protein assays which, it was determined, was due to over-heating. As a result, heat-treatment was gradually reduced by processors generally until the minimum heat-treatment consistent with maximum elaboration of protein quality and development of golden brown color was applied. During the process of reduction in the degree of toasting, urease activity reentered the picture. However, by this time the price of soybean oil meal had risen so that it no longer was an attractive item pricewise to the fertilizer industry.

Then, shortly after World War II was over, production facilities of several large synthetic chemical manufacturers began to produce urea for the feed industry in quantity. The use of urea as an ingredient in ruminant feeds has been increasing steadily since 1946. Most of these feeds contain soybean oil meal as an ingredient. Attempts to use urea and 44 percent solvent extracted soybean oil meal in combination in dairy and steer feeds and supplements were unsuccessful in some cases. The reason: urea and 44 percent protein solvent extracted soybean oil meal containing active urease *may be* incompatible.

Since this problem has arisen, extensive study and research have gone into the problem at a production level. The result, most processors of 44 percent protein solvent extracted soybean oil meal have succeeded in modifying their production so as to produce products of optimum nutritional quality and of urease content low enough to permit their safe use with urea in feeds, even in feeds containing high levels of molasses.

Specifications have been established by most solvent processors for urease activity so that their production is controlled within limits that are safe to use with urea. By procuring meal from reputable processors of long experience, mixers can be assured of getting solvent extracted soybean oil meal compatible with urea.

Mention should be made at this point that to the writer's knowledge, mechanically pressed soybean oil meals of the expeller type do not exhibit any appreciable urease activity. This is due to the fact that the heat developed during the process inactivates the urease enzyme.

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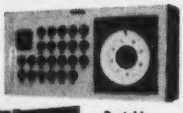

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Outlook for Crop Clouded in Midsouth

THE SOYBEAN CROP is now planted in most places and on the whole it went into the ground at normal planting date or earlier.

But most of the soybean belt both north and south reported hot weather late in June, and it was turning dry in northeastern Indiana, northwestern Ohio, southwestern Alabama, Illinois, Missouri and Ontario.

The acreage to be planted was still unsettled in late June in much of the Midsouth—Arkansas, northeast Louisiana, Mississippi and southeast Missouri—where earlier wet conditions had changed to hot and dry and there was little rainfall from mid-May to June 20. Much seeded cotton had not emerged at that time. With immediate rains much cotton land could still be replanted to beans in the area. But without rain beans also would suffer.

Planting was also somewhat delayed in Ontario and parts of Ohio. Ohio conditions were spotted with some poor stands of weedy corn. Some corn land was being replanted to soybeans in Ohio, and some soybean fields also had to be replanted.

Crop condition was normal most places where the crop was planted on time.

According to our latest reports soybean acreage is up 5 to 20 percent in southwestern Alabama, Minnesota, eastern Nebraska and Ontario.

Acreage is reported down in spot reports in northeastern Indiana, northwestern Ohio, northern Iowa, Mississippi and North Dakota. Observers who have made field counts in Iowa question whether this state's acreage will equal that of 1952. Government forecast for Iowa was 5 percent above the 1952 acreage though well below that of several previous years.

In other areas we have little change indicated in the acreage as compared with 1952.

Spot reports from our correspondents:

Alabama

H. I. West, Bay Minette, for southwest (June 22): Planting dates later than normal due to dry weather in May. Acreage much less than 1952 to date. Increase of 10 to 15 percent expected.

Arkansas

Paul C. Hughes, Farmers Soybean Corp., Blytheville (June 20): This area is coming nearer to missing a crop than any year yet. We have thousands of acres of cotton as well as soybeans that aren't up. If we get a rain in the next few days a lot of cotton acreage would go into beans. But we need that rain in the next 10 days. Last year we didn't sell a soybean seed after the first of June but we sold better than 2,000 bushels in June this year and would still do a land office business if it would rain. The acreage here is still in a state of flux but is much bigger now than last year.

Illinois

J. E. Johnson, Champaign (June 20): 1953 acreage as large as usual. Seeding methods the best on record. Some few fields with light stands due to dry conditions. Seeding will average earlier than usual; due to extreme heat starting in advance of summer, this can be of considerable advantage due to larger plant growth and deeper rooting that can cope with above average temperatures to a better advantage. Weed situation never better. In varieties Hawkeye first, Adams and Lincoln about equal. Hardly a field of Richland or other early varieties. Medium to full maturity varieties have proven most profitable.

Robert W. Weitzer, Valley Farms Co., Carrollton, for west central (June 20): No surface moisture and very little sub-surface moisture. Emergence very slow. Some beans tall and others just sprouting.

Indiana

K. E. Beeson, Indiana Corn Growers Association, West Lafayette (June 23): Acreage apparently at least equal to earlier intentions. Dry in southern half of Indiana. Stands more spotted due to poor emergence.

Minnesota

Howard E. Grow, Farmer Seed & Nursery Co., Faribault, for southeastern (June 20): Acreage 110 percent of last year. Hot with average moisture. Can use good rain every week. Condition of crop about average.

Missouri

Maurice Maze, MFA Co-op Grain & Feed Co., Mexico (June 20): Hot and dry. Moisture supply short. Condition of crop held back by dry, excessively hot weather.

Ohio

K. E. Schultz, Delphos Grain & Soya Products Co., for northwest (June 22): Badly in need of moisture. Ground crusted. In general crop is irregular.

Virginia

Louis Groh & Son, Claybank, for Tidewater Virginia (June 22): Acreage 105 percent of last year due to good weather following the grain harvest. Crop condition fair.

Ontario

Gilles De Putter, Appin, for Middlesex County (June 22): Planting date week to 10 days late. Acreage 25 to 35 percent increase over 1952. Need rain for late planting germination. Need a good late fall.

— s b d —

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PUBLICATIONS

For a complete list of books on the soybean crop and industry and related subjects drop a postcard to Circulation Department, Soybean Digest, Hudson, Iowa.

REFERENCES. The American Soybean Association as well as other organizations receives many requests for information on soybeans. Often the desired information is available in some published bulletin, book or periodical, including the files of the Soybean Digest.

As a result of these many requests the Northern Regional Research Laboratory has published a selected list of references for use by nonspecialists who want knowledge about soybeans and soybean technology.

Included are general references, agronomic aspects, marketing and storage, periodicals, food and feed uses and industrial uses.

SOYBEANS, A SELECTED LIST OF REFERENCES. Compiled by Nellie G. Larson, librarian, Peoria Branch, U. S. Department of Agriculture Library, and John C. Cowan, head oil and protein division, Northern Regional Research Laboratory. Northern Regional Research Laboratory, Peoria 5, Ill.

USE OF GUMS. It has long been known that lecithin, extracted from crude soybean oil gums, is effective for stabilizing soybean oil against oxidation and deterioration of flavor. But if lecithin is added before the deodorization step, the oil develops a brown color. If it is added after deodorization, u n d e sirable flavors may be introduced, and the oil darkens when it is heated to cooking temperatures. This is why commercial processors prefer to use citric acid or other stabilizers that are no more effective than lecithin but do not have its disadvantages.

Pilot plant experiments show that the gums obtained from crude soybean oil may be returned to the oil between the refining and bleaching steps to improve the stability of the oil and prevent darkening during subsequent deodorization.

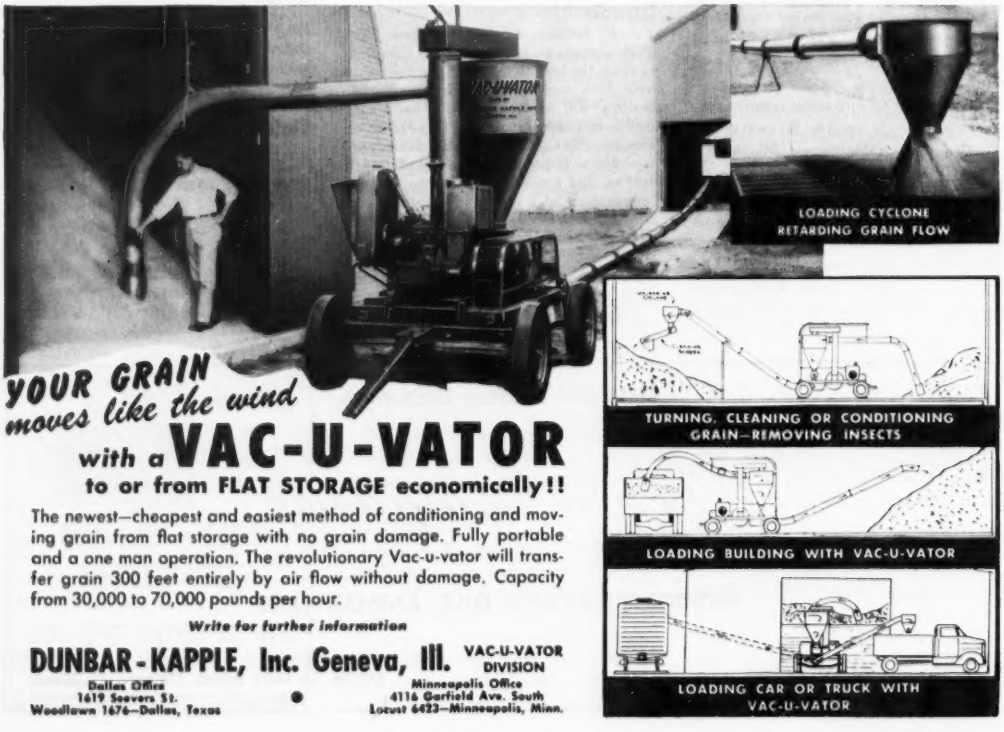
When gums are added to the oil before it is bleached the stabilizing effect is slightly less than when they are added between the bleaching and deodorizing steps. But this method is almost as effective as is the use of citric acid.

An advantage is that the gums may be used just as they are obtained from the crude oil, and do not have to be treated to prepare lecithin. Also, these inexpensive gums are always available to the oil refiner, unlike citric acid and other metal inactivators.

REPORT OF THE CHIEF OF THE BUREAU OF INDUSTRIAL CHEMISTRY, A G R I C ULTURAL RESEARCH A D M INISTRATION, 1952. U. S. Department of Agriculture, Washington 25, D. C.

OIL FLAVOR. The flavor constituents of "reverted" soybean oil and soy products have been studied by the Northern Regional Research Laboratory, Peoria, Ill., in cooperation with the University of Illinois and the University of Pittsburgh.

These substances have been identified as volatile carbonyl compounds, and a number of them have been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isolated. Also, it has been established that the reaction of linolenic acid produces some of the same substances formed during the aging of soybean oil. This reaction forms carbonyl compounds that have characteristic painty and grassy flavors. It remains to be determined which of these compounds is specifically responsible for the characteristic flavors of soybean oil products.

REPORT OF THE CHIEF OF THE BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY, AGRICULTURAL RESEARCH ADMINISTRATION, 1952. U. S. Department of Agriculture, Washington 25, D. C.

MISCELLANEOUS.

THE FLAVOR PROBLEM OF SOYBEAN OIL. XII. NITROGEN COORDINATION COMPOUNDS EFFECTIVE IN EDIBLE OIL STABILIZATION. By A. W. Schwab, Patricia M. Cooney, C. D. Evans, and J. C. Cowan, Northern Regional Research Laboratory, Peoria 5, Ill. Journal of the American Oil Chemists' Society, May 1953, pages 177-182.

EFFECT OF MOISTURE ON THE RATE OF SOLVENT EXTRACTION OF SOYBEANS AND COTTONSEED MEATS. By Lionel K. Arnold and Dahyabhai J. Patel, Iowa State College, Ames, Iowa. Journal of the American Oil Chemists' Society, May 1953, pages 216-218.

FUNDAMENTALS OF PAINT, VARNISH AND LACQUER TECHNOLOGY. III. OTHER DRYING OILS. By Elias Singer, Troy Chemical Co., New York, N. Y. American Paint Journal, May 11, 1953, pages 68-88. Includes soybean oil.

LETTERS

Overproduction?

TO THE EDITOR:

Certainly no one would quarrel with increasing yield per acre. But should this not be offset by a corresponding reduction in acreage? Our government has requested a modest reduction in the production of soybeans as well as the other oil crop, flax, for the 1953-crop season.

It seems to me that with a study of the agricultural situation, we are faced with what they wish to call a burdensome surplus in practically all lines of agricultural commodities.

I have lived through two major depressions which, I believe you will agree, had a very serious effect on our agricultural people; and in both of these instances, almost exactly the same so-called guidance was applied —*a steady increase in production.*

Each season that the production was increased, it brought about another drop in price, and I believe we are all aware that a tremendous surplus of agricultural commodities was in each case built up—in fact to a point where the market was apparently totally gone.

Now can there be anything wrong in an attempt to at least adjust production to demand and thus supply the people's needs, and with a fair remuneration to our producers?

We need capable guidance in the matter of soil conservation. Now, with the apparent overproduction of, at least, certain agricultural commodities, why not go along with the suggestion of our soils program and put more of our acres into grassland or otherwise take them out of production until demand catches up with supply?—*Lloyd L. Elliott, veteran agriculture instructor, Appleton Public Schools, Appleton, Minn.*

Certainly we agree that farmers must be organized to get a good price and do a good job of marketing. As an Association we spend far more effort in finding new uses for soybeans, in protecting our markets and finding new ones, than we do on production. —EDITOR.

Better U. S. Quality

TO THE EDITOR:

I am optimistic that future shipments (of U. S. soybeans) to Europe will, over an extended period, show an improvement in quality over those we have been receiving during the past few years. If this turns out to be correct then our various discussions at the International Seed Crushers Association Congress and the American Soybean Association convention will prove to have been useful.—*J. C. A. Faure, Unilever Ltd., London, England.*

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MARCH WHEAT short at	2.32½	2.27½	250.00
MARCH WHEAT short at	2.26	2.14½	575.00
MARCH WHEAT short at	2.16	2.08½	375.00
MARCH WHEAT short at	2.17	2.08½	425.00
MARCH WHEAT short at	2.18	2.08½	475.00
TOTAL WHEAT PROFITS			$4,275.00
SEPT. BEANS short at	$2.73	2.65½	375.00
SEPT. BEANS short at	2.71	2.65½	275.00
JAN. BEANS short at	2.72	2.60½	575.00
JAN. BEANS short at	2.67½	2.60½	350.00
JAN. BEANS short at	2.66	2.60½	275.00
TOTAL SOYBEANS PROFITS			1,850.00

JULY CORN sold short at $1.39½—$1.60½ and $1.61½, yielded nice profits, with more profits, coming!

HOW FORTUNES ARE MADE!

JULY 1932:
We said: Depression was over. Stocks and commodities ridiculously low. BUY! BUY! BUY! (Lows reached July 1932.)

JULY 1942:
We urged: Buy certain PEACE stocks, hold until PEACE came, and later buy yourself new $20,000 home and new Cadillac!

JULY 1942:

WE ADVISED BUYING		HIGH SINCE
LOFT CANDY	at 34c	$10.00
GILLETTE	at $1.50*	40.00
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JULY 1949:

WHEELING STEEL	at 13.00*	46.00
WORTHINGTON	at 14.00	55.00
KIMBERLY CLARK	at 18.00	52.00
GILLETTE	at 12.50*	40.00
GOODRICH	at 22.75*	80.00
UNION BAG	at 22.50	51.00

(*Making allowance for stock splits)

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GRITS and FLAKES... FROM THE WORLD OF SOY

◆ D. H. Denholm of the Chase Bag Co. industrial engineering department in St. Louis was recently elected to the Sigma Xi honorary fraternity—Washington University chapter. This is an honorary society devoted to science and research.

◆ Bemis Bro. Bag Co. discontinued bag manufacturing operations at the Jacksonville plant June 30 due to the failure of the consumption of textile bags in the Southeast to increase as expected. Bemis' productive capacities are being increased at New Orleans and Memphis plants to compensate for the Jacksonville closing.

◆ E. C. Lewis, manager of the margarine department of Armour & Co., Chicago, has been elected a director of the National Association of Margarine Manufacturers.

◆ The completion of 50 years of service with the Archer-Daniels-Midland Co., Minneapolis, was observed in June by Samuel Mairs, chairman of the board. Mairs joined ADM in 1903 as bookkeeper when the net worth of the firm was $125,000 compared with 88.5 million dollars today.

◆ *William W. Sudduth has been appointed manager of Kansas City grain operations in the Commander-Larabee Milling Co. division of Archer-Daniels-Midland Co. He succeeds Glenn F. Hilts, 67, who retired June 1.*

◆ John J. Quinlan, vice president in charge of soybean operations of Allied Mills, Inc., Chicago, has been elected to the board of directors to fill the unexpired term of the late A. G. Philips. L. J. Kerman has been elected assistant secretary and assistant treasurer. The accounting and auditing duties formerly supervised by Kerman will be taken over by Robert R. Carlson, who has been appointed to fill a newly created post of controller.

◆ A. E. Staley Manufacturing Co., Decatur, Ill., will have 39,800 square feet of additional storage space next fall when a new warehouse is completed at the plant site on East Eldorado Street, Decatur. The warehouse will be a 440-foot-long standardized, single-story, rigid steel-frame structure to be fabricated by the Luria Engineering Co., Bethlehem, Pa. Erection of the building is under the direction of Charles Harris, Staley's project engineer.

◆ Election of Robert G. Spears as marketing vice president of the Good Luck division of Lever Bros. Co. has been announced. He will be in charge of all marketing activities for Good Luck Margarine and related food products. He has been vice president and general manager of the division since joining Lever Bros. three years ago.

◆ *D. E. Tobey has been appointed sales representative for the Hammond Bag & Paper Co. in western Missouri, Kansas, Nebraska and Colorado, effective June 1. He recently resigned from the St. Regis Sales Co.*

HEADS OIL MILL GROUP

J. RALPH HUNEYCUTT

Tri States Oil Mill Superintendents Association will have its 29th annual convention in Biloxi, Miss., Hotel Buena Vista, June 2-3-4, 1954, it was decided at a meeting of this group in Memphis in June. J. Ralph Huneycutt, Planters Oil Co., Pine Bluff, Ark., long active in the association, and a past president of the national association, was elected president.

Woodson Campbell, Hollandale Cotton Oil Co., Hollandale, Miss., was elected vice president; C. C. Castillow, Southern Cotton Oil Co., Little Rock, Ark., secretary-treasurer; and Mrs. Castillow, corresponding secretary. B. C. Lundy, Greenville Oil Works, Greenville, Miss., a former president of the association, was named general chairman of the 1954 convention, and N. L. Pugh, Southern Cotton Oil Co., Newport, Ark., program chairman.

E. H. Tenent, Woodson-Tenent

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It means, too, that you can build a complete new storage installation or expand your present facilities in a *hurry*. You'll be set for the rush when grain starts moving . . . ready to handle bigger volumes for new profits.

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◆ Arthur J. Gibbs, purchasing agent for Fulton Bag & Cotton Mills in Atlanta, celebrated his 50th year of service with the company on June 15. He began his career with Fulton Bag in 1903 as a doffer in the spinning room. Company officials presented him with a 50-year gold service pin and a contour chair in recognition of his outstanding service record.

◆ George J. Loerzel has been appointed manager of the burlap department of the Central Bag & Burlap Co., Chicago. He will be in charge of burlap sales as well as customer servicing. For the past 15 years he has been in the employ of Mente & Co. as an assistant vice president, with headquarters in Chicago.

◆ The appointment of S. Grant Saunders as director of a newly formed economic research department was announced by T. L. Daniels, president of Archer-Daniels-Midland Co. He will coordinate activities of ADM's present market research and statistical departments and serve as staff economist. He comes to ADM from the Philco Corp., Philadelphia.

◆ *Acme-Hardesty Co., New York, has appointed Hukill Chemical Corp., Cleveland, to handle a complete line of fatty acids, hydrogenated oils and glycerine in the northern Ohio territory.*

◆ Abner C. Hopkins, Jr., has been appointed director of chemical sales for the chemical division of General Mills, Inc. He was formerly director of the commercial chemical development at the General Mills research laboratories in Minneapolis, a position he held since joining the company a year ago.

◆ Donald Danforth, president of Ralston Purina Co., has announced a major expansion in the company's feed manufacturing plant at Delmar, Del. Construction of additional plant facilities is expected to be completed by Oct. 1 in time for the fall crop of broilers.

◆ *Anderson Truck Terminal, Maumee, Ohio, is adding 20 new connected silos this summer to bring the firm's storage capacity to 4 million bushels.*

◆ Duncan Welde has been appointed operating superintendent of the Public Grain Elevator at New Orleans by the board of commissioners of the Port of New Orleans. He was formerly assistant plant manager of Ralston Purina Co., Bloomington, Ill., and has had grain elevator experience in Indiana, Iowa, Illinois and Kansas.

◆ The board of directors of Pillsbury Mills, Inc., traveled to Clinton, Iowa, to hold its regular meeting there July 6 and 7.

◆ Tenth anniversary of Feed Institute, Inc., will be observed Sept. 10, at Hotel Savery, Des Moines, Iowa. Carroll F. Swanson, Des Moines, one of the original organizers, will be chairman. The anniversary meeting precedes the nutrition school at Iowa State College the following day.

◆ The Soya Processing Co., Wooster, Ohio, has been purchased by the Ohio Equity Exchange, Lima, Ohio. Harry Plank will manage the plant under the new name of Ohio Equity Exchange.

Laboratories, Memphis, was made chairman of the research committee, with J. R. Mays, Barrow-Agee Laboratories, Memphis, and W. E. Hassler, Buckeye Cotton Oil Co., Memphis, as members. Mr. Huneycutt announced there would be three regional meetings, the first in Greenville, Miss., Dec. 5; the second in Little Rock, Ark., Feb. 7; and the last in Memphis, Apr. 4, 1954.

—sbd—

PROMOTED BY STALEY

KENNETH N. WRIGHT

The appointment of Kenneth N. Wright as manager of special feed products sales within the company's meal sales department has been announced by the A. E. Staley Manufacturing Co., Decatur, Ill.

Wright has been a member of the company's research staff since 1946. He has done extensive research work on heat treatment of soybean oil meal and during the past year and a half has been associated with Dr. W. N. McMillen, Staley director of feed nutrition, on a number of feed projects.

Among the special products which he will handle is Hi-Pro-Con, Staley's 50 percent soybean oil meal.

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AGRICULTURE
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"Cedric Adams showed us something new at the Minnesota State Fair last year"
"Imagine seeing the fair with Cedric Adams . . . that's what happened to Mrs. Boesch and me when a Cargill representative introduced us to Cedric at the Minnesota State Fair last year. Cedric, you know, tells about Cargill products every Sunday at 12:30 on his WCCO news broadcast. So, after our tour of the fair, we made a visit to some of the creative processing plants which Cargill has in the Twin Cities area. That's when Cedric really showed us something new . . . .
"We always thought of Cargill only as a grain firm. We never realized they also do so much processing of our farm products—and make products for our farms. Cedric explained how Creative Processing 'eats up' over three-fourths of all our farm crops. We never thought of it just that way, but it certainly makes sense. Every processor has to risk his money, his tools and his know-how to take the 'raw materials' we grow and make them into something that can be used or sold.
"This was the first real industrial lab most of us had ever seen. And we could see what it means to us farmers when creative processors invest in laboratories like this. Here Cargill is looking for new and better ways to use our farm crops—and for improved products that can be used on our farms.
"What's in a box of dog food? We were sure surprised to learn that a creative processor like Cargill puts 21 different farm products into just one box of Nutrena Dog Food. To a processed food like that means a steady, all-year-long demand for the numerous farm products that go into it.
"We watched Cedric conduct the finals of the 4-H Club Talent Contest sponsored by Cargill and the Minnesota Agricultural Extension Service. Here Cargill Vice President L. L. Crosby presents a check to the winners. With farm kids growing up in an age of Creative Processing, America's future looks mighty bright."
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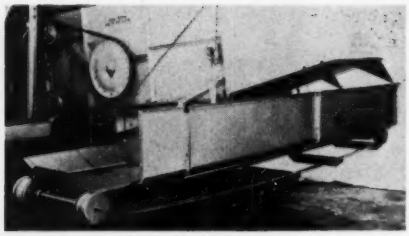


STRAW SAVER. Here is an attachment for combines that is of no interest to farmers spreading or plowing under straw. But of tremendous interest to all farmers saving straw.

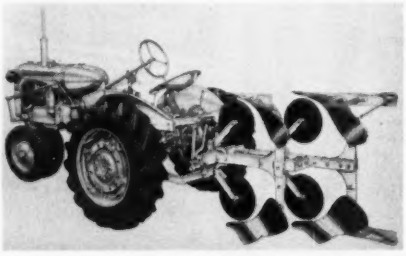
This implement eliminates the necessity of raking after combining. The fine straw and chaff that used to be lost during the raking operation are saved.

For further information write Soybean Digest 7g, Hudson, Iowa.

VOLUME MEASURES. A recent improvement in the Universal Moisture Tester is the use of volume samples instead of weighed samples. Plastic measures for both large and small grains are available, and are now being furnished as standard equipment with all new units.

Extensive tests show that the use of volume samples simplifies the testing operation and improves the accuracy of moisture readings.

For details write Soybean Digest 7b, Hudson, Iowa.



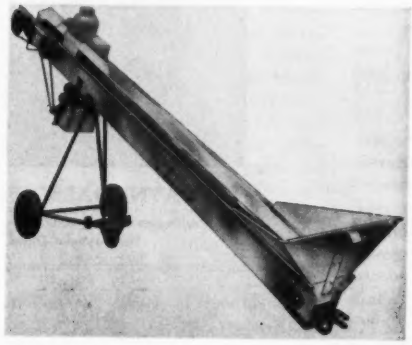
TWO-WAY SPINNER PLOW. Efficient low-cost plowing of lands where water supplies are a problem is possible with the new two-way, two-furrow mounted spinner-type plow shown here, which Allis-Chalmers has introduced for its Model CA farm tractor.

Back and dead furrows are eliminated by the spinner plow as all furrow slices are turned in one direction. On sloping fields and hillside contours the furrows turned uphill act as miniature terraces that retard run-off and hold soil in place.

For further information write Soybean Digest, 7e, Hudson, Iowa.

BAG TRUCK. The new Nutting Model 1027 bag truck handles eight to ten bags at a time in one easy operation. There is no hazardous tipping of the load to insert or withdraw the nose when loading or unloading. Auxiliary forward wheels permit rolling of the nose completely beneath the pallet and positioning of the frame snugly against the load.

For further information write Soybean Digest 7f, Hudson, Iowa.



BELT CONVEYOR. This new belt conveyor is built by the LMI Engineering & Mfg. Corp. Made of 15-gauge aluminum and equipped with heavy-duty eight-inch conveyor belt, Cardinal Belt-O-Veyor is designed to do a fast, efficient job in elevating all kinds of crops including soybeans. Speeds can be varied according to the individual requirement.

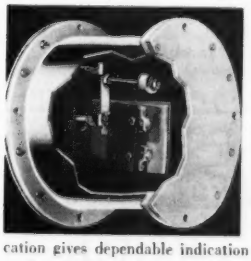
For further information write Soybean Digest 7a, Hudson, Iowa.

SPRAYER, DUSTER MANUAL. What type of sprayer or duster should you use to combat specific insects, weeds, plant diseases? What appliance is best for your job? How much of a given chemical should you use?

The National Sprayer & Duster Association has just published a 40-page fully illustrated manual to answer questions like these. The manual is sent as a public service without charge to all county agents, 4-H club leaders, teachers of vocational agriculture and extension specialists. To others, the regular price is $1, with reduced rates for groups.

For further information write Soybean Digest 7c, Hudson, Iowa.

BIN LEVEL INDICATORS. A new, special model bin-level indicator that solves the problem of securing dependable level indication in large bins, and also the lower-priced Bantam model for smaller spaces shown here are announced by the Bin-Dicator Co.



The Model CS Bin-Dicator is designed for suspended installation from above and can therefore be located anywhere in the bin where there will be a free flow of material to and away from the diaphragm. Flexibility as to location gives dependable indication of high and low levels.

For further information about both the Bantam and Model CS Bin-Dicators, write Soybean Digest 7d, Hudson, Iowa.

CONVEYOR. A new four-page illustrated bulletin detailing applications and specifications of the Rapistan Floor-Veyor belt conveyor has just been issued. The two-color folder has photos and descriptions of typical uses and features of the belt unit, which is used to move goods from floor to floor or horizontally in many types of industry.

For details write Soybean Digest 7h, Hudson, Iowa.

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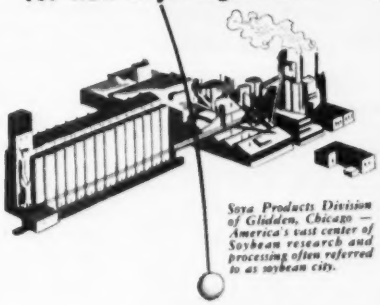

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WASHINGTON DIGEST

By WAYNE DARROW
Washington Correspondent for
The Soybean Digest

OUTLOOK. Soybeans are due for a major price adjustment when the crop is harvested this fall. Prices during the harvest peak are expected to drop far enough below the 1953 loan rate to encourage a relatively big loan program.

This is the estimate of top market men in the Department of Agriculture, based on the assumption of a 1953 crop in the neighborhood of 290 million bushels.

Some officials think that as much as 30 to 40 million bushels of soybeans may be put under price support during the 1953-54 marketing season—well over double the total for 1952-53.

The 1953 price support for soybeans is set at $2.56 a bushel, U. S. average, reflecting 90 percent of parity as of Sept. 15, 1952. Present parity for soybeans is $2.78 a bushel.

Most officials feel that it should pay growers to store soybeans this fall. Commodity Credit Corp. is pledged not to dump its large supplies of cottonseed oil on the domestic market during the coming season.

So long as this commitment holds, it's believed that a crop of around 290 million bushels of soybeans would be pretty well cleaned up by late spring of 1954, and give producers a more normal seasonal price increase than last season.

Commercial storage may be short. It's unofficially estimated that five grains — wheat, corn, oats, barley and rye—will require about 60 percent of the available off-farm storage space by Oct. 1. This compares with an estimated 49 percent occupancy of off-farm storage space last year, and 46 percent in 1951.

EXPORTS. Lower U. S. prices will help to maintain a high level of soybean exports during the coming season, officials believe. There is plenty of demand for U. S. soybeans. Price will be a big factor in exports during the coming season.

Exports have been large this year, and may reach a little more than 30 million bushels total for the season. The preliminary estimate of exports from the 1953 crop is 25 to 30 million bushels.

The Department of Agriculture will do all it can to push exports this year. The break in commodity prices has alarmed officials. It has forced a temporary reversal of plans to ease the government out of farm business as rapidly as feasible.

CARRYOVER. Trade estimates of a soybean carryover this year from 7 to 15 million bushels are believed too high. Top officials are still estimating a carryover of around 4 million bushels—not much different than in past years.

This is based on a feeling that the official estimate of the 1952 crop—292 million bushels—was close to actual production. Also, 1952 soybeans taken over by CCC in price support operations are expected to be moved into export channels quickly, and not add to carryover next fall. Last year's carryover was 3.6 million bushels; in 1951, 4.2 million bushels, and in 1950, 2.9 million bushels.

COTTONSEED. Soybeans will have more competition in the coming season. The new cottonseed price support program was dropped from 90 to 75 percent of parity to bring the price of cottonseed and soybean products into more normal relationship.

With the lower rate of support, officials feel that the bulk of the 1953 cottonseed crop will move into regular trade channels, with few products coming into CCC's hands.

CCC won't carry any cottonseed meal into the new marketing season. More than half of the nearly 1.2 million tons of meal taken from the 1952 crop had been sold by July 1.

The remainder of a little more than 500,000 tons is being offered at reduced prices for distribution to hard pressed livestock men in the drought areas of the Southwest.

In his recent speech at Lubbock,

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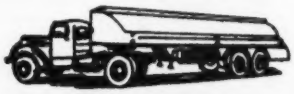

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Texas. Secretary of Agriculture Benson gave considerable attention to the cottonseed problem and its relation to soybeans. Here are a few excerpts from his talk:

"Recent improvement in the quality of soybean oil through research, and the large accumulation of cottonseed oil by the government, have resulted in the substitution of soybean oil for cottonseed oil in many products. This may mean the permanent loss of the premium which cottonseed oil has enjoyed over soybean oil. In the past, this premium has added as much as $3 to $5 a ton in the value of cottonseed to farmers . . .

"I know you have heard much about the butter buying program and the 230 million pounds of butter owned by the CCC. Do you know that we own enough cottonseed oil to manufacture over one billion pounds of margarine? We have enough oil to make five times as much margarine as we have butter.

"Isn't it ironical that the cottonseed industry, which fought so hard for the expansion of markets for vegetable oils, should find itself priced out of these markets by a government program?

"Of the 1,200,000 tons of cottonseed meal acquired, we still have on hand about ½ million tons."

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We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

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FOR SALE—ALL MODELS ANDERSON expellers, French screw presses, flaking and cracking rolls, stack cookers, desolventizers, filter presses, Anderson rotary tube dryers, meal coolers. Pittock & Associates, Glen Riddle, Pa.

FOR SALE—15 ANDERSON EXPELLERS; 11 Duo's, 4 Super Duo's; 10 Shriver and Sperry Filter Presses 42 inches x 42 inches to 12 inches x 12 inches; 3 Louisville Steam Tube Dryers; 6 Ro-Ball and Rotex Screens. Consolidated Products Co., Inc., 16 Park Row, New York 38, N. Y.

FOR SALE—1 30-INCH SQ. x 30 THRIVER Filter Press. Used in soy plant now closed. Price $500. Northwest Cooperative Mills, 635 North Fairview Ave., St. Paul W4, Minn.

FOR SALE — ONE 40 FOOT x 16 INCH Electric driven portable belt elevator, belt carried on 32 ballbearing rollers. Tamms Grain Co., Tamms, Ill.

BPI POST. Dr. Herbert W. Johnson of Raleigh, N. C., has been offered a post at the Bureau of Plant Industry to work on soybean disease research. The position of director of soybean work at the Bureau, formerly held by Dr. Martin Weiss who was made director of all field crops research, is still unfilled.

— s b d —

FIRST ASSOCIATION SECRETARY KILLED

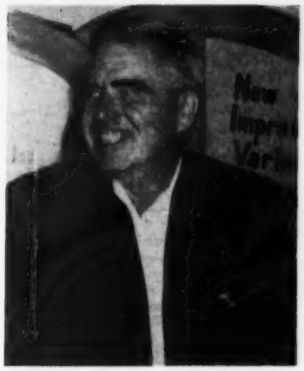
Ward A. Ostrander, 65, who pioneered soybean research at Purdue University, was killed at Milwaukee, Wis., Apr. 25 when he was struck by a car.

A resident of West Lafayette, Ind., he and his wife were visiting in the Wisconsin city. Burial was at Randolph, Wis.

Ostrander served as Purdue extension agronomist from 1918 until 1923. During this period he worked intensively with small groups of pioneer soybean producers in the state, and promoted the use of soybeans, particularly for hay, though he also foresaw the possibility of commercial utilization.

Ostrander helped promote the soybean day at the Taylor Fouts farm near Camden, Ind., where the American Soybean Association was organized in 1920. He served as Association secretary the first four years.

After leaving Purdue Ostrander became engaged in the grain elevator business, with interests in elevators at Buck Creek and Colburn. He also owned a farm near Dayton, Ind.



W. A. OSTRANDER, as his photo appeared on the front cover of the September 1952 issue of the Soybean Digest. He was one of three men who attended both the first and the 33nd annual conventions.

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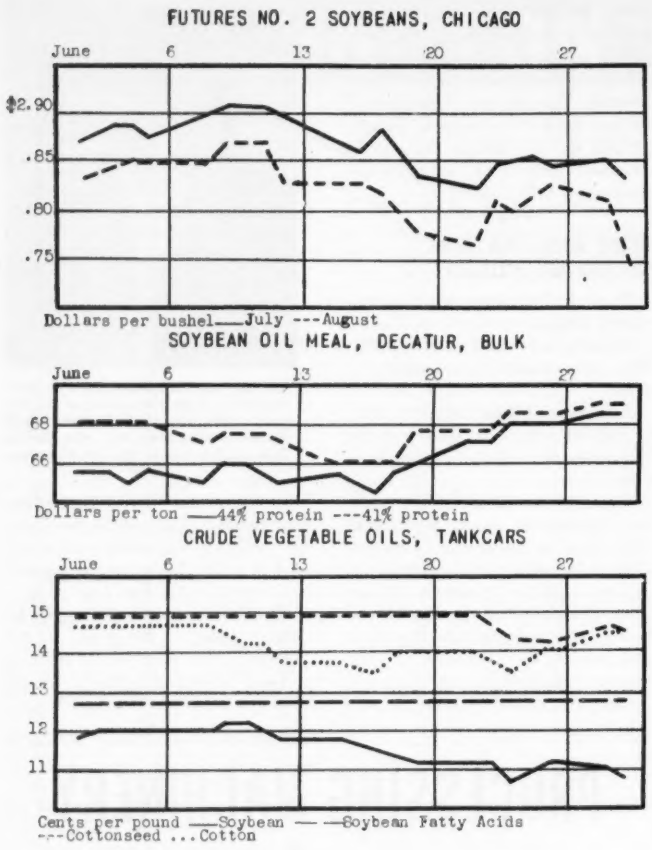


Soybean Oil Meal Stronger

JUNE MARKETS continued unsettled. All markets declined the fore part of the month and beans and oil found new lows for the year, then later in the month showed more strength.

Of most interest was the failure of the usual late spring or early summer squeeze on dwindling soybean supplies with higher prices to develop. There were apparently more soybeans in the country than usual at the time of year, and processors were not aggressive buyers.

But opinion as to the possibility of a better market for old crop beans still coming at the tail end of the season was far from unanimous.

Another feature was increased strength in soybean oil meal the latter part of June, apparently brought on by decreased supplies and some better demand by feed mixers.

Unsettled conditions, headlined by efforts at a Korean truce, played a big part in June markets. Weakening factors were the government's lowering of cottonseed supports for next year, trade talk of a substantial carry-over of 1952-crop beans into next fall (see discussion of this possibility on pages 32 and 33), and also weakness in other commodity markets.

There was good export interest on declines in the soybean market, however. Formosa bought 350,000 bushels of beans; and Germany was alloted 2½ million dollars to buy soybeans, and Norway, $700,000.

Mixed feed demand was said to be fairly good for a change, though mixers were still buying hand-to-mouth reminiscent of pre-war conditions. Improved hog feed demand in western areas was reported. The drought in the Southwest was a steadying influence. Production of dehydrated alfalfa was reported down in this section.

Soybean oil buyers were conservative since inventories of many manufacturers were large and the demand for finished products was slow.

Soybean oil and soybeans broke sharply June 30 due to the government report showing higher production and lower consumption of oil.

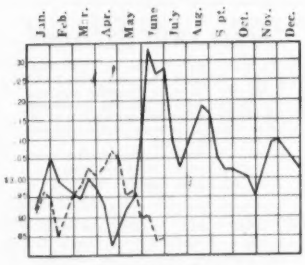
OILS. The present spread between soybean and cottonseed oil prices probably will be reduced by an increase in soybean oil prices, according to the Bureau of Agricultural Economics of the U. S. Department of Agriculture.

The 1953-crop cottonseed will be supported at $54.50 per ton for basis grade (75 percent of parity) compared with $66.50 per ton in the current marketing year (90 percent of parity).

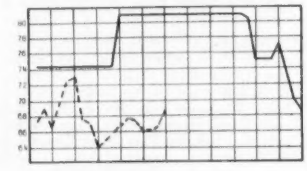
Soybean acid soapstocks, delivered Midwest, were quoted at 6 to 6¼ cents per pound during June.

TRENDS AT A GLANCE

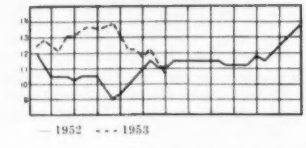
NEAR FUTURES SOYBEANS



SOYBEAN OIL MEAL BULK

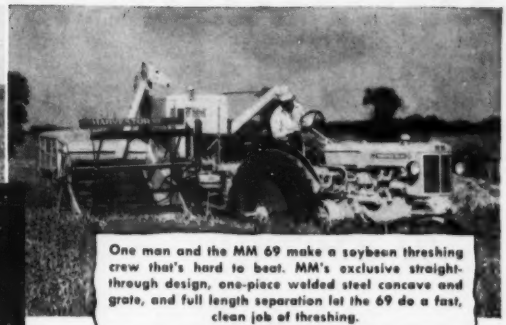


CRUDE SOYBEAN OIL



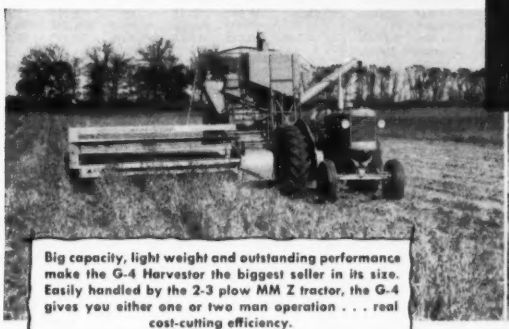
—1952 - - - 1953

The Mighty "S" Self-Propelled Powerflow Harvestor—now with new Powerflow Steering and a host of other exclusive new MM advantages. Available in 12, 13 and 14-foot sizes.



One man and the MM 69 make a soybean threshing crew that's hard to beat. MM's exclusive straight-through design, one-piece welded steel concave and grate, and full length separation let the 69 do a fast, clean job of threshing.

how all 4 MM HARVESTORS



Big capacity, light weight and outstanding performance make the G-4 Harvestor the biggest seller in its size. Easily handled by the 2-3 plow MM Z tractor, the G-4 gives you either one or two man operation . . . real cost-cutting efficiency.

The MM Uni-Harvestor—the one and only all-crop Harvestor. Shown here with the Uni-Combine attachment, the Uni-Tractor also mounts the 2-row Uni-Huskor and Uni-Picker-Sheller attachments as well as the new Uni-Forage Harvestor.

cut your Soybean Harvesting costs!

For a high-yield, high-profit soy bean crop, you need harvesting that gets *all* your crop . . . gets it *clean* . . . gets it into the truck box in the *shortest possible time*, and at the *lowest possible cost*. That's why so many sucessful soybean growers are turning to MM Harvestors. Experience has shown that MM Harvestors have what it takes to do a top-notch job of harvesting under the toughest conditions . . . at savings that mean *extra* profits on every acre. Check the advantages below . . . ask your MM dealer about the dozens of others. Whether your farm calls for the MM Harvestor 69, the self-propelled S, the 12-foot G-4 or the pace-setting new MM Uni-Harvestor, you'll find that MM gives you a combine that's *built* for matchless performance . . . outstanding in the field!

MM *HEADERS GET ALL THE CROP*

Weedy conditions . . . tangled, wind-snarled vines . . . uneven terrain —MM headers take them all in stride. Guard fingers can travel as low as 2 inches above the ground to pick up flattened vines. High speed sickles give a positive *shearing* action that cuts vines cleanly, with less shock and vibration. These and other advantages let MM headers do an unbeatable job of gathering in your crops.

GENTLE "RUBBING" ACTION

Rasp bar cylinders and the exclusive MM all-steel, one-piece welded concave and grate thresh with a gentle "rubbing" action similar to rubbing out the beans between your hands. This gentle action prevents cracking the beans or chewing stalks to bits.

EXCLUSIVE MM *GRAIN PAN*

In the exclusive MM grain pan, fishback channels and a steep drop from grate to cleaning shoe prevents bunching of beans at sides or ends on rolling land. Beans are evenly distributed, evenly delivered to the cleaning shoe for better cleaning. The cleaning shoe stays automatically level and in its best working position regardless of the tilt of the Harvestor.

HIGH SPEED AUGER UNLOADER

The auger unloader (standard with every MM Harvestor unless otherwise specified), lets you unload a full bin in 60 to 90 seconds. With the Self-Propelled "S" and the Uni-Harvestor, you save precious minutes on every round by unloading *on the go*.

SEE YOUR MM DEALER FOR FACTS ON THE MM HARVESTOR THAT'S RIGHT FOR YOUR FARM

MINNEAPOLIS MOLINE MM MODERN MACHINERY

MINNEAPOLIS-MOLINE MINNEAPOLIS 1, MINN.

Buying ... or Selling?

It's hard to tell. He could be

1. SELLING SOYBEANS
2. BUYING PURINA CHOWS
3. OR BOTH

THE AMERICAN FARMER depends on Purina to supply him with quality livestock and poultry Chows.

PURINA, likewise, looks to the American farmer for soybeans to make soybean meal, an important ingredient in practically all Purina Chows.

BOTH are sellers — both are buyers.

One of the farmer's best customers for soybeans and grains.

SOYBEAN PLANTS AT:
Bloomington, Illinois
Lafayette, Indiana
Kansas City, Missouri
Decatur, Illinois
Iowa Falls, Iowa
St. Louis, Missouri

RALSTON PURINA COMPANY

IN THE MARKETS

● **FACTORY USE VEGETABLE OILS** for March and April, as reported by Bureau of the Census.

PRIMARY MATERIALS: FACTORY PRODUCTION AND CONSUMPTION, AND FACTORY AND WAREHOUSE STOCKS, APRIL 1953-MARCH 1953 (1,000 pounds)

	Factory Production		Factory Consumption		Factory and warehouse stocks	
	April 1953	March 1953	April 1953	March 1953	Apr. 30, 1953	Mar. 31, 1953
Cottonseed, crude	131,004	165,269	170,533	*182,406	115,388	*149,973
Cottonseed, refined	159,289	*169,882	92,053	90,754	1/881,275	*811,815
Peanut, crude 2/	4,353	5,031	5,026	5,058	1,392	1,348
Peanut, refined	4,693	4,648	3,533	3,047	2,663	3,221
Corn, crude	22,355	24,130	23,460	22,895	15,233	15,147
Corn, refined	21,821	21,291	20,741	20,241	4,806	4,615
Soybean, crude	208,325	221,783	213,579	*219,173	156,951	158,194
Soybean, refined	198,287	*203,529	182,488	*190,474	103,952	*98,342
Coconut, crude	39,520	36,332	41,591	44,820	3/41,411	3/36,744
Coconut, refined	26,942	29,922	23,201	27,093	8,809	7,429
Linseed, raw	34,663	39,027	42,864	43,085	626,180	636,113
Linseed, refined	16,900	18,292	21,413	21,817	35,117	35,783
Vegetable footz (100% basis)	21,874	23,929	20,243	*20,511	54,948	56,340

1/ Commodity Credit Corporation, U. S. Department of Agriculture, reported 603,831,000 pounds of refined cottonseed oil owned by them Apr. 30. 2/ Data on production, and stocks held at crude oil mill locations, collected by Bureau of Agricultural Economics, U. S. Department of Agriculture. 3/ Data for stocks of crude coconut oil are on a commercial stocks basis and do not include figures for stock piles of strategic oils. *Revised.

FACTORY CONSUMPTION OF VEGETABLE OILS, BY USES, DURING APRIL 1953 (1000 pounds)

	Edible products			Inedible products			
	Shortening	Margarine	Other edible	Soap	Chemicals	Paint and varnish, lubricants and greases	Other inedible products
Cottonseed, refined	14,278	3,781	1,218		191		53
Soybean, crude				69		426	1,184
Soybean, refined	44,297	4,753	9,149			6,795	16 7,123
Vegetable foots				2,798		73	369
Hydrogenated cottonseed oil, edible	13,581	14,363	1,848				
Hydrogenated soybean oil, edible	36,010	49,702	1,029				
Fatty acid stock				474		66	272

● **PLYWOOD GLUE.** Consumption and stocks of glue by the softwood and hardwood plywood industry, reported by the Bureau of the Census. (Dry basis, 1,000 pounds.)

CONSUMPTION AND STOCKS OF GLUE AT SOFTWOOD PLYWOOD PLANTS

	Consumption		Stocks	
	April 1953	March 1953	April 1953	March 1953
Total	11,022	10,736	6,688	6,039
Soybean	6,480	6,303	3,155	2,929
Urea resins	642	586	901	465
Phenolic resins	2,850	2,865	1,842	2,004
Other	1,050	982	790	641

GLUE CONSUMPTION AND STOCKS (AT HARDWOOD PLYWOOD PLANTS): BY TYPE, 1951 AND 1952

	Consumption		Stocks		
Type of glue	1951	1952	Mar. 31 1951 1/	Dec. 31 1951	Dec. 31 1952
Total, all types	62,368	62,148	9,902	7,985	6,139
Phenolic resins	2,151	1,858	274	299	212
Other waterproof 2/	1,552	1,017	425	223	129
Urea resins 3/	41,917	44,443	4,784	3,574	3,764
Soybean	6,413	5,590	990	937	753
Other moisture resistant 4/	822	701	228	99	100
Tapioca	4,798	3,217	2,002	1,627	587
Other dry bond 5/	4,715	5,322	1,199	1,226	594

1/ These data not available for Dec. 31, 1950. 2/ Includes resorcinal, melamine, and some melamine-urea resins. 3/ Includes some fortified urea resins. 4/ Includes casein and blood glues and silicate of soda. 5/ Includes animal glues and starch glues other than tapioca.

● INSPECTIONS. Soybeans, inspected receipts by grades and percent, as reported by Production and Marketing Administration.

Grade	Oct.-May 1951-52		Oct.-May 1952-53		May 1952		April 1953		May 2/ 1953	
	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.
No. 1	39,295	24	28,231	17	5,273	36	2,343	18	1,271	14
No. 2	71,725	44	77,636	46	6,798	47	6,691	52	4,418	50
No. 3	33,873	20	29,635	17	1,396	10	1,872	14	1,395	16
No. 4	12,586	8	22,193	13	549	4	1,413	11	1,067	12
Sample	6,360	4	11,874	7	497	3	646	5	659	8
Total	163,839	100	169,568	100	14,513	100	12,965	100	8,809	100

1/ Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,650 bushels. 2/ Of the May 1953 receipts, 250 bushels were black, 250 mixed, and the remainder yellow soybeans. Inspections of soybeans in May included 927,000 bushels as cargo lots, 69,531 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

● FUTURES TRADING and open contracts in soybean oil meal on Memphis Merchants Exchange Clearing Association, in tons bulk.

	Volume of Trading	Open Contracts		Volume of Trading	Open Contracts
May 26	2,700	86,600	June 15	5,300	97,800
May 27	4,000	87,400	June 16	11,400	107,200
May 28	2,500	86,700	June 17	6,400	112,100
May 29	3,300	87,400	June 18	2,500	113,300
June 1	3,400	87,700	June 19	3,100	113,700
June 2	15,600	98,500	June 22	4,400	112,700
June 3	6,400	98,100	June 23	6,200	113,800
June 4	4,100	97,300	June 24	5,600	115,000
June 5	2,300	98,400	June 25	4,500	115,600
June 8	1,900	98,700			
June 9	3,600	98,200	Total for 23 days reported	111,300	
June 10	5,700	97,800			
June 11	3,300	97,400			
June 12	3,100	98,000			

● SHORTENING. Standard shortening shipments reported by the Institute of Shortening and Edible Oils, Inc., in pounds:

May 23	2,628,959
May 30	3,177,917
June 6	4,845,394
June 13	4,094,107
June 20	3,655,734

Grand total of shortening and edible oil shipments in May was 230,777,000 pounds compared with 272,940,000 pounds in April, according to the Institute. Total shipments of shortening and edible oil for the first five months of the year were 1,384,109 pounds.

● PRICES. Average price for soybeans received by farmers, effective parity and price support rate (dollars per bushel) as reported by Production and Marketing Administration.

Average Farm Price			Effective parity	National Average Price Support Rate	
May 15 1952	Apr. 15 1953	May 15 1953	May 15 1953	1952 crop	1953 crop
2.77	2.81	2.78	2.78	2.56	2.56

Average farm and parity prices from Crop Reporting Board.

● EXPORTS. U. S. exports of soybeans and soybean oil for April, as reported by the Foreign Agricultural Service of the U. S. Department of Agriculture.

Soybeans	1,793,201 bu.
Soybean oil:	
Crude	1,560,643 lbs.
Refined but not further processed	798,604 lbs.
Refined, deodorized and hydrogenated	94,643 lbs.

Converted to a soybean equivalent basis, the exports for April amounted to 2,043,449 bushels.

● SEED IMPORTS. A total of 116,800 pounds of soybean seed was admitted to the United States under the federal seed act during the period of July 1, 1952, to May 31, 1953, reports Production and Marketing Administration. All was from Canada.

FOR SMOOTHER, MORE EFFICIENT PROCESSING

The Prater Rotary Airlock Feeder links your processing operation into a tightly-knit, smooth running circuit. It seals off the bottom discharge of dust collectors, preventing air from leaking into the collector and feeding dust out of the system as it is collected. It is also used to feed granular materials into the processing equipment against pressure—**at a pre-determined rate!**

If you're converting to the solvent method of extraction, be sure to include the Prater Pulverizer and Prater Rotary Airlock Feeders as part of the system. With them, Prater offers years of experience serving the soybean industry, plus up-to-date recommendations to make your operation satisfactory in every respect.

The Prater Rotary Airlock is built in two sizes, 8" and 10", requiring 1/3 HP and 1/2 HP respectively. It is furnished as a complete "package unit" or may be purchased without motor.

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—"in the bag"

Fredman Bag Company
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MILWAUKEE, WISCONSIN
ESTABLISHED 1889

● **PROCESSING OPERATIONS.** Reported by Bureau of the Census for April and May.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, MAY 1953-APRIL 1953

Products	Unit of measure	Production		Shipments and transfers		End of month stocks	
		May 1953	April 1953	May 1953	April 1953	May 31, 1953	Apr. 30, 1953
Soybean:							
Cake and meal	tons	488,621	*456,080	483,104	*442,984	172,836	*167,319
Lecithin	1000 lbs.	2,151	1,949	2,086	2,252	2,641	2,576
Edible soy flour, full fat	tons	496	345	388	441	276	168
Edible soy flour, other	tons	4,553	3,919	4,312	4,177	1,144	903
Industrial soy flour	tons	3,024	1,552	2,461	(1)	1,088	525

*Revised. (1) Not shown to avoid disclosure of figures for individual companies.

SOYBEANS: RECEIPTS, CRUSHING AND STOCKS AT OIL MILLS, BY STATES, MAY 1953-APRIL 1953
(Tons of 2,000 pounds)

State	Receipts at mills		Crushed or used		Stocks at mills	
	May 1953	April 1953	May 1953	April 1953	May 31, 1953	April 30, 1953
U. S.	308,581	*430,566	620,108	*576,037	1,031,389	*1,342,916
Arkansas	(1)	(1)	5,601	8,841	39,695	69,001
Illinois	151,144	176,387	239,281	233,299	449,516	537,653
Indiana	30,240	74,602	70,097	66,602	40,819	80,676
Iowa	75,456	89,033	106,534	89,112	146,709	177,787
Kansas	(2)	(2)	11,390	11,311	8,949	(2)
Kentucky	(2)	(2)	14,901	15,475	26,302	(2)
Minnesota	17,579	30,180	29,456	28,696	20,486	32,363
Mississippi	(2)	(1)	(2)	*6,830	16,256	*27,051
Missouri	(2)	(2)	11,113	11,236	28,819	(2)
Nebraska	(2)	(2)	5,498	5,003	15,112	(2)
North Carolina	(2)	(2)	8,199	(2)	(2)	28,664
Ohio	25,999	*45,433	64,873	58,204	147,389	*186,263
Oklahoma	(2)	(2)	(2)	(2)	———	(2)
Texas	(2)	(2)	(2)	(2)	(2)	(2)
All other	31,868	32,325	53,165	41,428	91,337	203,458

*Revised. (1) Receipts exceeded by reshipments of beans previously received and held in the State. U. S. receipts are on net basis, excluding transfers between mills. (2) Included in "All other" to avoid disclosure of figures for individual companies.

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, MAY 1953-APRIL 1953

State	Crude oil (thousand pounds)				Cake and meal (tons)			
	Production		Stocks		Production		Stocks	
	May 1953	April 1953	May 31, 1953	April 30, 1953	May 1953	April 1953	May 31, 1953	April 30, 1953
U. S.	226,293	*208,414	73,967	53,046	488,621	*456,080	172,836	*167,319
Arkansas	1,785	2,919	623	577	4,463	7,058	6,638	7,692
Illinois	90,138	87,994	27,718	22,603	180,128	179,685	71,634	65,704
Indiana	25,719	24,376	12,447	5,966	56,541	53,174	(1)	(1)
Iowa	38,664	31,179	12,587	7,607	86,930	72,387	9,745	18,351
Kansas	4,156	3,995	1,062	430	9,467	9,562	(1)	(1)
Kentucky	5,577	5,843	527	763	11,750	12,239	774	456
Minnesota	10,104	9,774	3,372	3,059	23,552	23,073	1,094	4,082
Mississippi	(1)	*2,585	(1)	(1)	(1)	*5,608	3,413	*2,669
Missouri	4,063	4,007	809	822	8,920	9,121	729	461
Nebraska	1,736	1,544	654	237	4,669	4,250	(1)	(1)
N. Carolina	2,084	(1)	1,273	567	6,521	(1)	12,591	8,851
Ohio	23,459	21,077	5,889	4,654	51,796	46,315	5,859	3,368
Oklahoma	(1)	(1)	(1)	(1)	(1)	(1)	3,503	4,862
Texas	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
All other	24,385	13,121	7,006	5,761	43,884	33,608	56,856	50,823

*Revised. (1) Included in "All Other" to avoid disclosure of figures for individual companies.

● **STOCKS.** Production and Marketing Administration's commercial grain stock report. (1,000 bu.)

U. S. Soybeans in Store and Afloat at Domestic Markets

	June 1	June 8	June 15	June 22
Atlantic Coast	580	594	543	637
Gulf Coast	828	871	977	1,214
Northwestern and Upper Lake	125	125	125	102
Lower Lake	1,126	824	534	542
East Central	659	578	507	414
West Central, Southwestern & Western	2,107	1,934	1,870	1,633
Total current week	5,425	4,926	4,556	4,542
Total year ago	5,074	4,169	4,067	3,671

U. S. Soybeans in Store and Afloat at Canadian Markets

Total current week	176	118	104	84
Total year ago	0	0	0	0

Total North American Commercial Soybean Stocks

Current week	5,425	5,044	4,660	4,626
Year ago	5,074	4,169	4,067	3,671

Lucky 7 For Clean, Safe Storage

4 BS&B Storage Tanks

3 BS&B Truckloading Tanks

This BS&B installation at the Gano Grain Corp. in Pawnee Rock, Kansas, has 4 large storage tanks with a capacity of 16,386 bu. each; 3 truckloading tanks with a capacity of 1,729 bu. each — a total capacity of 71,131 bu. for outstanding, safe storage and easy, efficient handling of grain.

No matter how many units you need in your installation, when you choose BS&B you've picked the lucky number! BS&B offers you the proved, economical way to meet your storage requirements. You get maximum protection against fire, vermin, moisture and weather. And you can use these sturdy, all-steel tanks . . . fitted with durable rubber gaskets . . . for storing any type of grain, feed, vegetable oil or molasses!

Easy to erect BS&B Grain Tanks go up in days instead of weeks. They need only minimum maintenance . . . give you a lifetime of trouble-free service. What's more, insurance rates are lower when you store your grain in Bolted Steel Grain Tanks!

Write today for full information. Design layouts and standard foundation plans are furnished without charge.

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What makes a "good price"?

Skellysolve for Animal and Vegetable Oil Extraction

Applications

SKELLYSOLVE B. Making edible oils and meals from soybeans, corn germs, flaxseed, peanuts, cottonseed and the like. Closed cup flash point about —20°F.

SKELLYSOLVE C. Making both edible and inedible oils and meals, particularly where lower volatility than that of Skellysolve B is desired because of warm condenser water. Closed cup flash point about 13°F.

SKELLYSOLVE D. Quality solvent at competitive prices. For degreasing meat scraps, extracting oil-saturated fuller's earth, general extraction uses. Closed cup flash point about 3°F.

SKELLYSOLVE F. Extracting cottonseed meals and other products in laboratory analytical work. Originally made to conform to A.O.C.S. specifications for petroleum ether, and for pharmaceutical extractions where finest quality solvent is desired. Closed cup flash point about —50°F.

SKELLYSOLVE H. Making edible and inedible oils and meals where greater volatility is desired than that of Skellysolve C or D. Closed cup flash point about —20°F.

"Doc" MacGEE says: Buying solvents on price alone is risky business. Like every other commodity, the value is determined by the quality. And since the quality of your solvent is reflected so positively in your manufacturing operations and in the quality of your product . . . it pays to insist on the finest that money can buy.

Comparison proves it's Skellysolve! Check it for composition and boiling range . . . low order of toxicity . . . sweet odor and low sulphur content. Compare, too. Skellysolve's minimum of unsaturates and pyrogenic decomposition products . . . its minimum of excessively volatile compounds, which help to keep your operations and products free from odor, taste and flash trouble.

Fast vaporization from oils and meals . . . low end points . . . freedom from greasy residues, and low solvent losses are big features offered by Skellysolve. And they are features you can count on because of Skellysolve's famed uniformity. Batch after batch meets the same high quality requirements . . . under strict laboratory control.

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